LONDON SCHOOL OF TROPICAL MEDICINE
NOT TO BE TAKEN AWAY.

THE FAUNA OF BRITISH INDIA,

INCLUDING

CEYLON AND BURMA.

Published under the authority of the Secretary of State for India in Council.

EDITED BY LT.-COL. C. T. BINGHAM.

COLEOPTERA.—Vol. I.
(CERAMBYCIDÆ).

BY

C. J. GAHAN.

LONDON:
TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.

CALCUTTA AND SIMLA:
THACKER, SPINK, & CO.

BURMA:
MYLES STANDISH & CO.,
RANGOON.

BOMBAY:
THACKER & CO., LIMITED.

BERLIN:
R. FRIEDLÄNDER & SOHN,
11 CARLSTRASSE.

1906.

LONDON SCHOOL OF TROPICAL MEDICINE
NOT TO BE TAKEN AWAY

3303

ALERE FLAMMAM.

PRINTED BY TAYLOR AND FRANCIS.
RED LION COURT, FLEET STREET.

PREFACE.

This short volume is the first issued of a series that is intended to give a systematic account of the Coleopterous Fauna of British India.

The present work on the Longicorn Beetles of India was undertaken some years ago by Mr. C. J. Gahan, whose unique knowledge of the group is well known. From a variety of causes, but chiefly want of leisure, the Author has been unable until now to complete a sufficient portion of the MS. to allow of the publication of even an instalment. This issue, therefore, is only Part I. of the contemplated volume, and deals solely with the forms arranged under the family Cerambycidæ, which according to the latest classification includes the Prionidæ. A considerable portion of Part II., which will give an account of the Lamiidæ, is already in manuscript; it is therefore confidently expected that the completion of the whole work will not be unduly delayed.

Other volumes on the Coleoptera of India are in active preparation, and it is intended to include a General Introduction to the Order with one of these volumes. In the

meantime, to allow the reader to follow the technical terms used in the descriptions of these insects, diagrammatic illustrations of the parts of beetles belonging to the group here dealt with, and explanations thereof, are subjoined below.

I may add that Vol. II. of the Butterflies, the MS. of which is nearly completed, will follow this present volume.

C. T. BINGHAM.

October 1906.

LIST OF THE PRINCIPAL WORKS QUOTED IN THE SYNONYMY.

A. M. N. H. Annals and Magazine of Natural History. London, 1838–1906.

Ann. Mus. Civ. Genov. Annali del Museo Civico di Storia Naturale di Genova. Genoa, 1870–1906.

Ann. Soc. d'Agric. Lyon. Annales de la Société d'Agriculture, Histoire naturelles et Arts utiles de Lyon. Lyon & Paris, 1838–1906.

Ann. Soc. Ent. Belg. Annales de la Société Entomologique de Belgique (C. R.—Comptes rendus bound with the Annales, paged in Roman numerals). Bruxelles, 1857–1906.

Ann. Soc. Ent. Fr. Annales de la Société Entomologique de France. Paris, 1832–1906.

Berl. ent. Zeit. Berliner entomologische Zeitschrift. Berlin, 1857–74, 1881–1906.

Boisd. Voy. l'Astrolabe. Voyage de découvertes de l'Astrolabe. Faune Entomologique, par le Docteur Boisduval. Paris, 1835.

Bull. Soc. Imp. Nat. de Moscou. Bulletin de la Société Impériale des Naturalistes de Moscou. Moscow, 1829–1906.

Casteln. Hist. Nat. Col. Histoire Naturelle des Insectes Coléoptères par M. le Comte de Castelnau. 2 vols. Paris, 1840.

Cist. Ent. Cistula Entomologica. 3 vols. London, 1869–1884. (Of vol. iii. three parts only published.)

Du Val et Fairm. Gen. Coléopt. d'Europe. Genera des Coléoptères d'Europe, par M. Jacquelin du Val. 4 vols. Paris, 1857–1868. (Vols. iii. & iv. by L. Fairmaire.)

Encycl. Méth. Encyclopédie Méthodique—Insectes. Vol. V. par A. G. Olivier; Vol. X. par Comte Le Pelétier et Audinet-Serville. Paris, 1790–1825.

Ent. Mo. Mag. The Entomologists' Monthly Magazine. London, 1864–1906.

Ent. Nachr. Entomologische Nachrichten. Putbus, Stettin und Berlin, 1875–1906.

Entomologist. The Entomologist. London, 1840–1906.

Ent. Tidskr. Entomologisk Tidskrift utgiven af Entomologiska Föreningen i Stockholm. Stockholm, 1880–1906.

Fabr. Ent. Syst. Entomologia Systematica emendata et aucta, secundum classes, ordines, genera, species, adjectis synonymis, locis, observationibus, descriptionibus. 4 vols. Johann Christian Fabricius. Hafniæ, 1792–1794. Index 1796; Supplement 1798.

Fabr. Mant. Ins. Mantissa Insectorum; sistens eorum species nuper detectas, adjectis characteribus genericis, differentiis specificis, emendationibus, observationibus. 2 vols. Johann Christian Fabricius. Hafniæ, 1787.

Fabr. Syst. Eleuth. Systema Eleutheratorum, secundum ordines, genera, species, adjectis synonymis, locis, observationibus et descriptionibus. 2 vols. Johann Christian Fabricius. Kiliæ, 1801.

Fabr. Syst. Ent. Systema Entomologiæ, sistens Insectorum classes, ordines, genera, species, adjectis synonymis, locis, descriptionibus et observationibus. Johann Christian Fabricius. Flensburgi et Lipsiæ, 1775.

Gemm. & Har. Cat. Col. Catalogus Coleopterorum hucusque descriptorum synonymicus et systematicus, auctoribus Dr. Gemminger et B. de Harold. 12 vols. Munich, 1868-1876.

Geoffroy, Hist. Ins. de Paris. Histoire abrégée des Insectes qui se trouvent aux environs de Paris. 2 vols. Paris, 1762.

Germ. Mag. Ent. Germar, Magazin der Entomologie. 4 vols. Halle, 1813–1818.

Gmelin, Syst. Nat. J. F. Gmelin's edition of Linné's "Systema Naturæ," Ed. 13. Lipsiæ, 1788–1793.

Gray's Zool. Misc. The Zoological Miscellany, ed. by J. E. Gray. London, 1831-1844.

Guér. Icon. Règn. Anim., Ins. F. E. Guérin-Méneville, Iconographie du Règne Animal de G. Cuvier—Insectes. Paris, 1829–1844.

Hor. Soc. Ent. Ross. Horæ Societatis Entomologicæ Rossicæ; (*Called also*) Trudui Russkago entomologicheskago obshchestva v. St. Petersburg. St. Petersburg, 1861–1906.

Hügel's Kaschmir. Kaschmir und das Reich der Siek. Baron C. A. A. von Hügel. 4 vols. Stuttgart, 1840–1848.

Ind. Mus. Notes. Indian Museum Notes, issued by the Trustees. Published by authority of the Government of India. Calcutta, 1889–1906.

Journ. Ent. The Journal of Entomology, descriptive and geographical. 2 vols. London, 1862–1866.

Kirby, Fauna Boreali-Americana. Fauna Boreali-Americana, or the Zoology of the Northern parts of British America, by John Richardson, M.D. Pt. IV. Coleoptera by the Rev. W. Kirby. London, 1837.

Lacord. Gen. Coléopt. Histoire Naturelle des Insectes. Genera des Coléoptères, ou Exposé méthodique et critique de tous les genres proposés jusqu'ici dans cet ordre d'insectes, par M. Th. Lacordaire. 12 vols. Paris, 1854–1876.

Lap. et Gory, Hist. Nat. et Iconogr. des Ins. Coléopt. Histoire Naturelle et Iconographie des Insectes Coléoptères, publiée par Monographies séparées par F. L. Laporte (Comte de Castelnau) et H. Gory. Texte 4 vols. Planches 4 vols. Paris, 1837–1841.

Leconte & Horn, Classif. Col. N. Amer. Classification of the Coleoptera of North America, prepared for the Smithsonian Institution by John L. Leconte and George H. Horn. Washington, 1883.

Leicharting, Verz. Tyrol. Ins. Verzeichniss und Beschreibung der Tyroler Insecten, by Johann Nepomuk Elden von Leicharting. 2 vols. Zürich, 1781–1784.

Linn. Syst. Nat. Systema Naturæ, per regna tria naturæ, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Carl v. Linné. Ed. decima reformata, Halæ Magdeburgicæ, 1758. Ed. duodecima reformata, Holmiæ, 1766–1768.

Mém. Soc. Ent. Belg. Mémoires de la Société Entomologique de Belgique. Bruxelles, 1892–1906.

Mém. Soc. R. Sci. de Liége. Mémoires de la Société Royale des Sciences de Liége. Liége, 1843–1906.

Motsch. Études Entom. Motschoulsky, Études Entomologiques. Helsingfors et Dresden 1853–1862.

Mulsant, Coléopt. de France. Histoire Naturelle des Coléoptères de France par C. Mulsant. Paris, 1862–1863.

Notes Leyd. Mus. Notes from the Royal Zoological Museum of the Netherlands at Leyden. Leyden, 1879–1906.

Nouv. Archives du Mus. Paris. Nouvelles Archives du Muséum Histoire Naturelle. Paris, 1865–1906.

Oliv. Ent. Entomologie, ou Histoire Naturelle des Insectes, avec leurs caractères génériques et spécifiques, leur description, leur synonymie, et leur figure enluminée, par M. Olivier. Texte 6 vols. Planches 2 vols. Paris, 1759–1808.

P. Z. S. Proceedings of the Scientific Meetings of the Zoological Society of London. London, 1830–1906.

Redtenb. Fauna Austriaca. Fauna Austriaca. Die Käfer, nach der analytischen Methode bearbeitet, von Ludwig Redtenbacher. Wien, 1858.

Rev. Zool. Revue Zoologique par la Société Cuvierienne, publié sous la direction de M. Guérin-Méneville. Paris, 1838–1848.

Rev. et Mag. Zool. Revue et Magasin de Zoologie pure et appliquée, par Guérin-Méneville et Ad. Focillon. 2nd Series. Paris, 1849–1879.

Schönh. Syn. Ins. Synonymia Insectorum, oder: Versuch einer Synonymie aller bisher bekannten Insecten, nach Fabricii Systema Eleutheratorum geordnet. 2 vols. Stockholm, 1806–1817.

Scientific Results Second Yarkand Mission, Coleopt. Scientific Results of the Second Yarkand Mission, published by order of the Government of India. Coleoptera by H. W. Bates. London, 1890.

Silberm. Rev. Ent. Revue Entomologique, par Gustave Silbermann. Strasbourg & Paris, 1833–1837.

Stephens, Illustr. Brit. Ent., Mand. Illustrations of British Entomology, or a Synopsis of Indigenous Insects, by J. F. Stephens. Mandibulata. 7 vols. London, 1828–1835.

Stett. ent. Zeit. Entomologische Zeitung, herausgegeben von dem entomologische Verein zu Stettin. Stettin, 1840–1906.

Thoms. Archiv. Ent. Archives Entomologiques, par Mons. J. Thomson. 2 vols. Paris, 1857–1858.

——, **Essai Class. Ceramb.** Essai d'une Classification de la famille des Cérambycides et matériaux pour servir à une monographie de cette famille, par Mons. J. Thomson. Paris, 1860.

——, **Syst. Ceramb.** Systema Cerambycidarum, ou exposé de tous les genres compris dans la famille des Cérambycides et familles Limitrophes, par Mons. J. Thomson. Liége, 1864–1865.

Trans. Ent. Soc. Transactions of the Entomological Society of London. London, 1836–1906.

Trans. Linn. Soc. Transactions of the Linnean Society of London. London, 1791–1906.

Trans. Zool. Soc. Transactions of the Zoological Society of London. London, 1835–1906.

Verh. z.-b. Ges. Wien. Verhandlungen der k.-k. zoologische-botanischen Gesellschaft in Wien. Vienna, 1852–1906.

Westw. Cab. Or. Ent. The Cabinet of Oriental Entomology, by J. O. Westwood, Esq., F.L.S. London, 1848.

White, Cat. Coleopt. B. M., Longic. Catalogue of Coleopterous Insects in the Collection of the British Museum. Part viii, Longicornia, i & ii. London, 1853–1855.

Zool. Jour. Zoological Journal. London, 1825–1835.

EXPLANATION OF THE TERMS USED FOR THE PARTS OF A LONGICORN BEETLE.

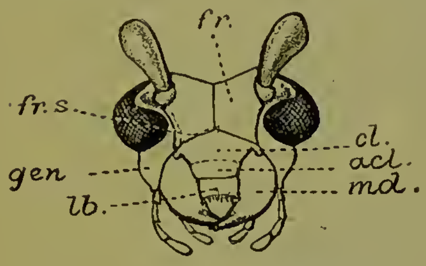


Fig. 1.—Head of *Nyphasia pascoei*, Lac.

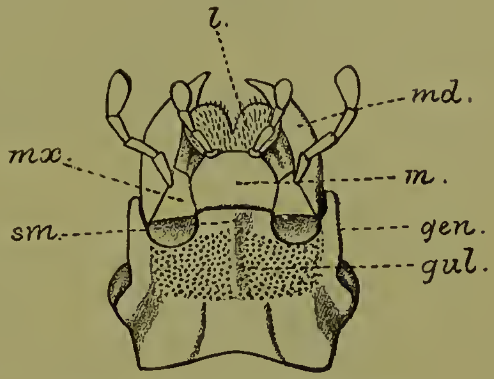


Fig. 2.—Underside of head of *Oxymirus cursor*, Linn.

Fig. 1.—Upper surface of head.

fr, front.
fr.s, frontal suture.
gen, gena.
cl, clypeus.
acl, ante-clypeus.
lb, labrum.
md, mandible.

Fig. 2.—Lower surface of head.

gul, gula.
gen, gena.
sm, submentum.
m, mentum.
l, labium.
mx, maxilla.
md, mandible.

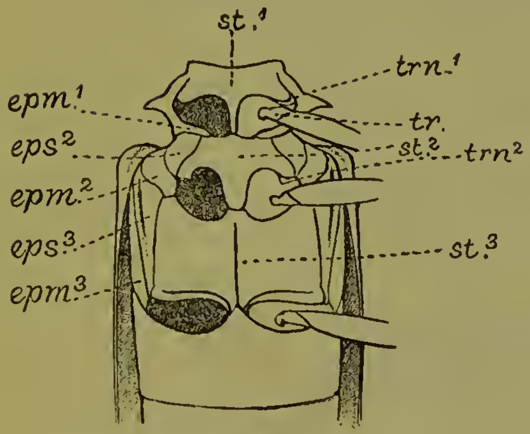


Fig. 3.—*Oxymirus cursor*, Linn.

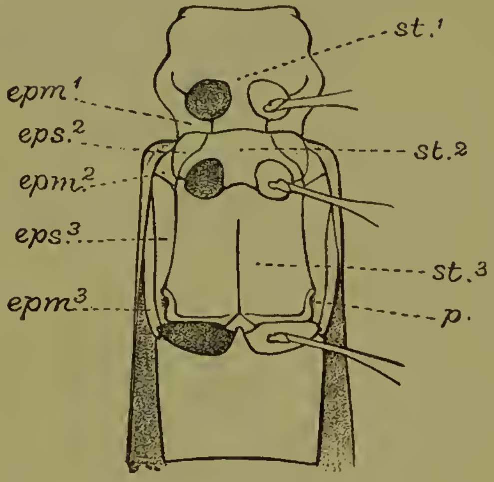


Fig. 4.—*Nyphasia pascoei*, Lac.

Fig. 3.—Sternum, showing the front and middle coxal cavities open. $st.^1$, $st.^2$, st^3, pro-, meso- and metasternum; epm^1, epm^2, epm^3, epimera of pro-, meso- and metathorax; eps^2, eps^3, episterna of meso- and metathorax; *tr*, trochanter; *trn*, trochantin.

Fig. 4.—Sternum, showing the front and middle coxal cavities closed. st^1, st^2, st^3, pro-, meso- and metasternum; epm^1, epm^2, epm^3, epimera of pro-, meso- and metathorax; eps^2, eps^3, episterna of meso- and metathorax; *p*, pore.

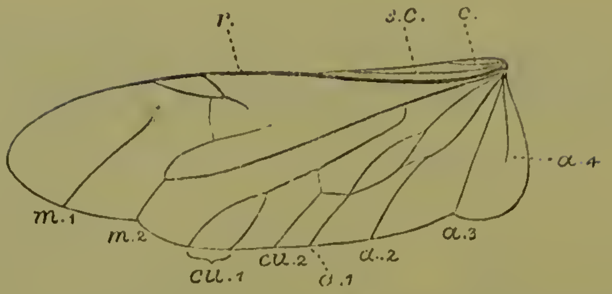


Fig. 5.—Wing of *Oxymirus cursor*, Linn.

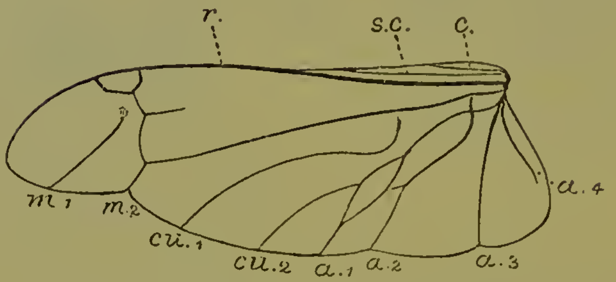


Fig. 6.—Wing of *Dorysthenes rostratus*, Fab.

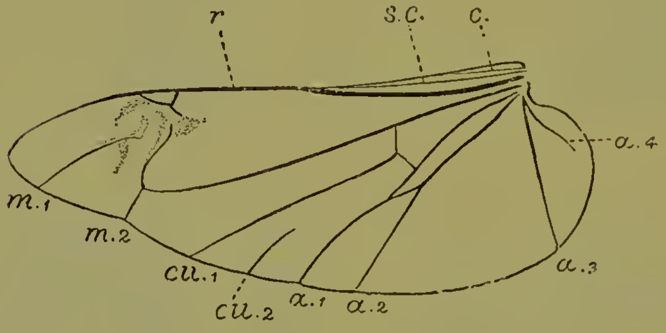


Fig. 7.—Wing of *Neocerambyx paris*.

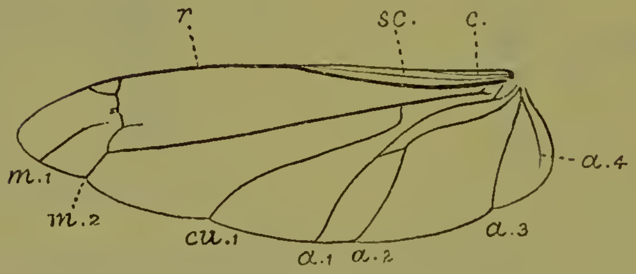


Fig. 8.—Wing of *Aphrodisium rubripennis*.

Figs. 5, 6, 7, and 8.—Wing-venation (according to Ganglbauer). *c*, costal; *sc*, subcostal; *r*, radial; m^1, m^2, 1st and 2nd medial; cu^1, cu^2, 1st and 2nd cubital; a^1, a^2, a^3, a^4, 1st, 2nd, 3rd, and 4th anal.

Superfamily LONGICORNIA.

The superfamily Longicornia can conveniently be divided into two families—the *Cerambycidæ* and the *Lamiidæ*, the chief differences between which are briefly tabulated below.

A. Head in front oblique or subvertical; last joint of palpi not pointed at the end; fore tibiæ not grooved beneath	**Cerambycidæ.**
B. Head in front vertical or bent inwards well below the thorax; last joint of the palpi pointed at the end; fore tibiæ generally with a groove beneath.	**Lamiidæ.**

SYSTEMATIC INDEX.

	Page
Order COLEOPTERA	1
Suborder **Polyphaga**	1
Superfamily LONGICORNIA.	1
Fam. 1. CERAMBYCIDÆ	1
Subfam. 1. *Prioninæ*	2
Group 1. Prionini	4
1. Dorysthenes, *Vigors*	5
1. rostratus, *Fab.*	6
2. montanus, *Guér.*	7
2. Dissosternus, *Hope*	7
1. pertii, *Hope*	8
3. Baladeva, *Waterh.*	8
1. walkeri, *Waterh.*	9
4. Lophosternus, *Guér.*	9
1. indicus, *Hope*	10
2. zivetta, *Thoms.*	11
3. socius, *Gahan*	11
4. hugelii, *Redtenb.*	11
5. falco, *Thoms.*	12
6. palpalis, *Gahan*	12
7. buqueti, *Guér.*	13
8. similis, *Gahan*	13
5. Paraphrus, *Thoms.*	13
1. granulosus, *Thoms.* ..	14
6. Prionus, *Geoffroy*	14
1. corpulentus, *Bates* ..	15
2. elliotti, *Gahan*	16
7. Prionomma, *White*	16
1. atratum, *Gmelin*	17
8. Ancyloprotus, *White*	18
1. bigibbosus, *White* ...	19
9. Logæus, *C. O. Waterhouse*	19
1. subopacus, *C. O. Waterhouse*	20
10. Priotyrannus, *Thoms.* ..	21
1. mordax, *White*	22
Group 2. Acanthophorini.	22
1. Acanthophorus, *Serville.* .	23
1. serraticornis, *Oliv.*	23
2. rugiceps, *Gahan*	24
3. modicus, *Gahan*	25
Group 3. Cantharocnemini	25
1. Cantharocnemis, *Serville* .	26
1. downesi, *Pascoe*	26
Group 4. Eurypodini	27
1. Neoprion, *Lacord.*	28
1. parandræformis, *Lacord*	29
Group 5. Macrotomini ..	29
1. Rhaphipodus, *Serville* ..	30
1. taprobanicus, *Gahan* ..	30
2. subopacus, *Gahan* ..	32
3. gahani, *Lameere*	32
4. andamanicus, *Gahan* ..	33
2. Remphan, *Waterhouse* ..	33
1. hopei, *Waterhouse* ..	34
3. Macrotoma, *Serville*	35
1. fisheri, *C. O. Waterhouse*	35
2. crenata, *Fabr.*	36

	Page
3. plagiata, *C. O. Waterhouse*	37
4. spinosa, *Fab.*	38
4. Zooblax, *Thoms.*	38
1. æneipennis, *C. O. Waterhouse*	39
2. elateroides, *Thoms.*	40
Group 6. Ægosomini	41
1. Baralipton, *Thoms.*	42
1. maculosum, *Thoms.*	42
2. Dinoprionus, *Bates*	43
1. cephalotes, *Bates*	43
3. Ægosoma, *Serville*	44
1. ornaticolle, *White*	45
2. marginale, *Fab.*	45
3. cingalense, *White*	46
4. tibiale, *White*	47
5. buckleyi, *Gahan*	47
6. sulcipenne, *White*	48
7. bowringi, *Gahan*	48
8. costipenne, *White*	49
9. terminale, *Gahan*	49
4. Dandamis, *Gahan*	50
1. nigropunctatus, *Auriv.*	50
5. Sarmydus, *Pascoe*	51
1. subcoriaceus, *Hope*	51
2. antennatus, *Pascoe*	52
Group 7. Monodesmini	52
1. Anœme, *Gahan*	53
1. andrewesi, *Gahan*	54
Group 8. Philini	54
1. Dœsus, *Pascoe*	55
1. telephoroides, *Pascoe*	56
2. taprobanicus, *Gahan*	56
2. Philus, *Saunders*	57
1. globulicollis, *Thoms.*	57
Subfam. 2. *Disteniinæ*	58
1. Cyrtonops, *White*	59
1. punctipennis, *White*	60
2. nigra, *Gahan*	60
2. Dynamostes, *Pascoe*	61
1. audax, *Pascoe*	61
3. Distenia, *Serville*	62
1. kalidasæ, *Lameere*	63
2. dohertii, *Gahan*	64
3. dravidiana, *Gahan*	64
4. Typodryas, *Thoms.*	65
1. callichromoides, *Thoms.*	65
2. trochanterius, *Gahan*	66
5. Melegena, *Pascoe*	66
1. flavipes, *Gahan*	66
6. Nericonia, *Pascoe*	67
1. nigra, *Gahan*	67
Subfam. 3. *Lepturinæ*	68
1. Apatophysis, *Chevrolat*	69
1. kashmiriana, *Semenow*	70
2. montana, *Gahan*	71
3. modica, *Gahan*	71
2. Peithona, *Gahan*	71
1. prionoides, *Gahan*	72
3. Capnolymma, *Pascoe*	73
1. cingalensis, *Gahan*	73
4. Apiocephalus, *Gahan*	74
1. licheneus, *Gahan*	74
5. Caraphia, *Gahan*	75
1. cribrata, *Gahan*	75
2. minor, *Gahan*	76
6. Teledapus, *Pascoe*	77
1. dorcadioides, *Pascoe*	77
7. Oxymirus, *Mulsant*	78
1. cursor, *Linn.*	79
8. Rhondia, *Gahan*	79
1. pugnax, *Dohrn*	80
9. Leptura, *Linn.*	81
1. rubriola, *Bates*	81
2. miniacea, *Gahan*	82
3. lavinia, *Gahan*	83
4. clytina, *Gahan*	84
5. lepta, *Gahan*	84
6. cribripennis, *Gahan*	85
7. manipurensis, *Gahan*	86
8. frainii, *Fairm.*	86
10. Ephies, *Pascoe*	87
1. coccineus, *Gahan*	87
2. sulcipennis, *Bates*	88
11. Pyrocalymma, *Thoms.*	88
1. pyrochroides, *Thoms.*	89
2. conspicua, *Gahan*	89
Subfam. 4. *Cerambycinæ*	90
Group 1. Protaxini	92
1. Protaxis, *Gahan*	93
1. fulvescens, *Gahan*	93
Group 2. Asemini	94
1. Tetropium, *Kirby*	95
1. oreinum, *Gahan*	95
2. Criocephalus, *Mulsant*	96
1. exoticus, *Sharp*	96
2. unicolor, *Gahan*	97
Group 3. Œmini	98
1. Amimes, *Pascoe*	99
1. macilentus, *Pascoe*	99

	Page
2. Tetraommatus, *Perroud*	100
1. filiformis, *Perroud*	101
2. muticus, *Pascoe*	101
3. bimaculatus, *Gahan*	102
4. insignis, *Gahan*	102
5. nigriceps, *Pascoe*	103
3. Hypoëschrus, *Thoms.*	104
1. indicus, *Gahan*	104
4. Œmospila, *Gahan*	104
1. maculipennis, *Gahan*	105
5. Xystrocera, *Serv.*	105
1. globosa, *Oliv.*	106
2. festiva, *Thoms.*	107
6. Oplatocera, *White*	107
1. callidioides, *White*	108
2. oberthuri, *Gahan*	108
Group 4. Hesperophanini	109
1. Gnatholea, *Thoms.*	110
1. eburifera, *Thoms.*	111
2. simplex, *Gahan*	111
3. fryana, *Gahan*	111
2. Hesperophanes, *Mulsant*	112
1. cribricollis, *Bates*	113
2. erosus, *Gahan*	113
3. Stromatium, *Serville*	114
1. barbatum, *Fab.*	114
2. longicorne, *Newman*	115
4. Zoodes, *Pascoe*	115
1. maculatus, *White*	116
2. quadridentatus, *Gahan*	116
3. fulguratus, *Gahan*	117
4. nilgiriensis, *Gahan*	117
5. eburioides, *Lacord.*	118
6. compressus, *Fab.*	118
Group 5. Cerambycini	119
1. Plocæderus, *Thoms.*	120
1. ferrugineus, *Linn.*	121
2. obesus, *Gahan*	121
3. pedestris, *White*	123
4. humeralis, *White*	123
5. consocius, *Pascoe*	124
2. Neocerambyx, *Thoms.*	124
1. paris, *Wied.*	124
2. grandis, *Gahan*	125
3. Æolesthes, *Gahan*	126
1. basicornis, *Gahan*	126
2. holosericea, *Fab.*	127
3. sinensis, *Gahan*	128
4. induta, *Newman*	128
5. indicola, *Bates*	128
6. sarta, *Solsky*	129
4. Massicus, *Pascoe*	129
1. unicolor, *Gahan*	130
2. venustus, *Pascoe*	130
5. Hoplocerambyx, *Thoms.*	131
1. spinicornis, *Newman*	131
6. Diorthus, *Gahan*	132
1. simplex, *White*	133
7. Pachydissus, *Newman*	133
1. parvicollis, *Gahan*	134
8. Derolus, *Gahan*	135
1. mauritanicus, *Buquet*	135
2. discicollis, *Gahan*	136
3. demissus, *Pascoe*	136
9. Margites, *Gahan*	137
1. exiguus, *Gahan*	137
2. modicus, *Gahan*	138
3. sulcicollis, *Gahan*	138
10. Dymasius, *Thoms.*	139
1. macilentus, *Pascoe*	139
2. fulvescens, *Gahan*	140
3. minor, *Gahan*	140
4. plagiatus, *Gahan*	141
11. Dialeges, *Pascoe*	141
1. pauper, *Pascoe*	142
2. undulatus, *Gahan*	143
12. Sebasmia, *Pascoe*	143
1. templetoni, *Pascoe*	144
2. testacea, *Gahan*	144
3. nigra, *Gahan*	145
13. Trachylophus, *Gahan*	145
1. sinensis, *Gahan*	146
14. Rhytidodera, *White*	146
1. robusta, *Gahan*	147
2. simulans, *White*	148
3. integra, *Kolbe*	148
15. Xoanodera, *Pascoe*	148
1. trigona, *Pascoe*	149
2. amœna, *Pascoe*	150
3. regularis, *Gahan*	150
Group 6. Phoracanthini	151
1. Nyphasia, *Pascoe*	151
1. torrida, *Pascoe*	152
2. apicalis, *Gahan*	152
3. fuscipennis, *Gahan*	152
4. pascoei, *Lacord*	153
2. Nysina, *Gahan*	153
1. orientalis, *White*	153
Group 7. Callidiopsini	154
1. Gelonætha, *Thoms.*	154
1. hirta, *Fairm.*	155
2. Trinophylum, *Bates*	155
1. cribratum, *Bates*	156
3. Ceresium, *Newman*	156
1. gracile, *Perroud*	157
2. rufum, *Lameere*	157

Page

3. angustulum, *Gahan* .. 158
4. geniculatum, *White* .. 158
5. zeylanicum, *White*.... 158
6. leucosticticum, *White*. 159
7. rotundicolle, *Pascoe* .. 160
8. modestum, *Gahan* 160
9. ventrale, *Gahan*...... 160
10. apicale, *Gahan* 161
11. nilgiriense, *Gahan* .. 161
12. andamanicum, *Gahan*. 161
13. simplex, *Gyll.* 162

4. Salpinia, *Pascoe* 163
 1. socia, *Gahan* 163

5. Stenygrinum, *Bates* 163
 1. quadrinotatum, *Bates*. 164

Group 8. Obriini 164

1. Obrium, *Serville* 165
 1. posticum, *Gahan* 165

2. Stenhomalus, *White* 166
 1. fenestratus, *White* .. 166
 2. Y-pallidum, *Motsch.* . 167
 3. lateralis, *Pascoe*...... 167

3. Ibidionidum, *Gahan* 168
 1. corbetti, *Gahan*...... 168

Group 9. Molorchini...... 169

1. Molorchus, *Fab.*......... 169
 1. taprobanicus, *Gahan*.. 170
 2. filiformis, *Motsch.*.... 170

2. Merionœda, *Pascoe*...... 171
 1. indica, *Hope* 171
 2. andrewesi, *Gahan* 172
 3. taprobanica, *Gahan* .. 173
 4. nigriceps, *White* 173
 5. amabilis, *Jordan* 174

3. Kunbir, *Lameere*........ 174
 1. telephoroides, *Lameere* 174

Group 10. Rosaliini 175

1. Rosalia, *Serville* 176
 1. lameerei, *Brongn.* 176
 2. lateritia, *Hope* 177
 3. gravida, *Lameere* 178
 4. hariola, *Thoms.* 178
 5. decempunctata, *Westw.* 179
 6. læta, *Lameere* 179
 7. formosa, *Saund.* 180

2. Callichromopsis, *Chevr.*.. 180
 1. telephoroides, *Westw.* . 181

Group 11. Mythodini 182

1. Phyodexia, *Pascoe* 182
 1. concinna, *Pascoe* 183

Page

Group 12. Purpuricenini.. 183

1. Purpuricenus, *Latrielle* .. 184
 1. sanguinolentus, *Oliv.* . 184
 2. malaccensis, *Lacord.*.. 185
 3. haussknechti, *Witte* . 186
 4. montanus, *White* 186

2. Euryphagus, *Thoms.* 187
 1. lundii, *Fab.* 188

Group 13. Callichromini . 189

1. Zonopterus, *Hope* 190
 1. flavitarsis, *Hope*...... 191
 2. consanguineus, *Ritsema* 191
 3. redemanni, *Nonfried*.. 192
 4. corbetti, *Gahan*...... 192
 5. diversus, *Gahan*...... 193

2. Niræus, *Newm.* 193
 1. tricolor, *Newm.*...... 194

3. Pachyteria, *Serville* 194
 1. superba, *Gestro* 195
 2. fasciata, *Fab.* 195
 3. calumniata, *Ritsema*.. 196
 4. dimidiata, *Westw.* .. 196
 5. chrysogaster, *Ritsema*. 197

4. Chloridolum, *Thoms.* .. 198
 1. bivittatum, *White*.... 198
 2. trogoninum, *Pascoe* .. 199
 3. alcmene, *Thoms.* 199
 4. cinnyris, *Pascoe*...... 200
 5. nympha, *White*...... 201
 6. perlætum, *White* 201

5. Nothopeus, *Pascoe*...... 202
 1. hemipterus, *Oliv.* 203
 2. fulvus, *Bates* 203
 3. tibialis, *Ritsema*...... 204

6. Aphrodisium, *Thoms.* .. 205
 1. cantori, *Hope*........ 205
 2. planicolle, *van de Poll*. 206
 3. cribricolle, *van de Poll* 207
 4. hardwickianum, *White* 208
 5. neoxenum, *White* 208
 6. robustum, *Bates* 209
 7. griffithi, *Hope* 209
 8. rubripennis, *Hope* 210

7. Chelidonium, *Thoms.*.... 210
 1. argentatum, *Dalm.* .. 211
 2. cinctum, *Guér.* 212
 3. sinense, *Hope*........ 212
 4. gibbicolle, *White* 213

8. Polyzonus, *Casteln.* 213
 1. saigonensis, *Bates* 214
 2. tetraspilotus, *Hope* .. 214
 Var. megaspilus, *Gahan*. 215
 Var. microspilus, *Gahan*. 215

Page
Var. macrospilus, *Gahan*. 216
3. flavocinctus, *Gahan* .. 216
4. bizonatus, *White* 216
5. brevipes, *Gahan* 217
6. obtusus, *Bates* 218
7. watsoni, *Gahan* 218
8. prasinus, *White* 219
9. democraticus, *Lameere* 220
9. Anubis, *Thoms*......... 220
1. inermis, *White*...... 220
2. rostratus, *Bates* 221
3. bipustulatus, *Thoms*. . 221
4. fimbriatus, *Bates*.... 222
10. Ipothalia, *Pascoe* 222
1. pyrrha, *Pascoe* 223

Group 14. Pyrestini 224
1. Pachylocerus, *Hope* 224
1. corallinus, *Hope* 225
2. unicolor, *Dohrn*. 225
3. sulcatus, *Brongn*..... 225
4. crassicornis, *Oliv*..... 226
2. Pyrestes, *Pascoe* 227
1. miniatus, *Pascoe* 227
2. pyrrhus, *Gahan* 228
3. birmanicus, *Gahan* .. 228
4. dohertii, *Gahan* 229
3. Erythrus, *White* 229
1. bicolor, *Westw*. 230
2. westwoodi, *White* .. 231
3. coccineus, *Gahan*.... 231

Group 15. Prothemini .. 232
1. Homalomelas, *White* .. 232
1. gracilipes, *Parry* 233
2. quadridentatus, *Gahan* 234
3. zonatus, *Pascoe* 234
2. Prothema, *Pascoe* 235
1. aurata, *Gahan* 235

Group 16. Thraniini 236
1. Thranius, *Pascoe* 236
1. gibbosus, *Pascoe* 237
2. simplex, *Gahan* 237
3. triplagiatus, *Gahan* .. 238
4. fryanus, *Gahan* 238

Group 17. Clytini 239
1. Xylotrechus, *Chevr*. 241
1. smei, *Lap. et Gory* .. 241
2. subscutellatus, *Chevr*. 242
3. carinifrons, *Lap. et Gory* 243

Page
4. buqueti, *Lap. et Gory* 243
5. stebbingi, *Gahan*.... 244
6. lateralis, *Gahan* 244
7. quadripes, *Chevr*. .. 245
8. subditus, *Chevr*. 246
9. gestroi, *Gahan* 246
10. hampsoni, *Gahan* .. 247
11. carinicollis, *Jordan* .. 248
12. incurvatus, *Chevr*. .. 248
13. contortus, *Gahan* .. 249
14. subdepressus, *Chevr*. 249
2. Clytus, *Leicharting* 250
1. callizonus, *Gahan* .. 251
2. monticola, *Gahan* .. 251
3. simulator, *Nonfried*.. 252
4. montanus, *Nonfried* . 253
5. minutissimus, *Nonfried* 253
3. Perissus, *Chevr*. 254
1. fuliginosus, *Chevr*. .. 254
2. lætus, *Lameere* 255
3. persimilis, *Gahan*.... 256
4. nilgiriensis, *Gahan* .. 256
5. mutabilis, *Gahan* .. 256
6. aper, *Chevr*......... 257
7. dohertii, *Gahan* 258
8. myops, *Chevr*. 258
9. parvulus, *Gahan* 258
4. Ischnodora, *Chevr*. 259
1. macra, *Chevr*. 259
5. Caloclytus, *Fairm*. 260
1. annularis, *Fab*....... 261
2. sagittarius, *Gahan* .. 261
3. agnatus, *Chevr*. 262
4. jucundus, *Perroud* .. 262
5. arciferus, *Chevr*. 263
6. socius, *Gahan* 264
7. distinguendus, *Perroud* 264
8. rubricollis, *Lap. et Gory* 265
9. alboscutellatus, *Chevr*. 265
10. 14-maculatus, *Chevr*.. 266
11. moestus, *Chevr*. 266
12. melancholicus, *Chevr*. 267
13. dohertii, *Gahan* 267
14. patricius, *Gahan* 268
15. cingalensis, *Gahan* .. 268
16. ludens, *Gahan* 269
17. assimilis, *Hope* 269
18. ignobilis, *Bates* 270
19. parens, *Allard* 270
6. Rhaphuma, *Pascoe* 271
1. diana, *Gahan* 271
2. patkaina, *Gahan* 272
3. horsfieldi, *White*.... 272

Page
4. phiale, *Gahan* 273
5. fulgurata, *Gahan* 274
6. manipurensis, *Gahan* . . 274
7. sexnotata, *Chevr.* 275
8. placida, *Pascoe* 275
9. fallax, *Chevr.* 276
10. præusta, *Lameere* 276
11. rhea, *Gahan* 276
12. quinquenotata, *Chevr.* . 277
13. trimaculata, *Chevr.* . . 277
14. suturalis, *Gahan* 278
15. trinalba, *Gahan* 278
16. elegantula, *Gahan* 279
7. Clytocera, *Gahan* 279
1. chionospila, *Gahan* . . 280
8. Demonax, *Thoms.* 280
1. lineatus, *Chevr.* 281
2. balyi, *Pascoe* 282
3. monticola, *Gahan* 282
4. albosignatus, *Gahan* . . 283
5. oblongomaculatus, *Gahan* 283
6. nigromaculatus, *Gahan*. 284
7. literatus, *Gahan* 284
8. semiluctuosus, *White*. . 285
9. dignus, *Gahan* 286
10. leucoscutellatus, *Hope* . 286
11. testaceus, *Hope* 287
12. decens, *Gahan* 288
13. decorus, *Gahan* 288
14. reticollis, *Gahan* 289
15. walkeri, *Pascoe* 289
16. andamanicus, *Gahan* . . 290
17. macilentus, *Chevr.* 291
18. dohertii, *Gahan* 291
19. mulio, *Pascoe* 292
20. quadricolor, *Gahan* . . 292
21. fryanus, *Gahan* 293
22. quadricollis, *Gahan* . . 293
23. bicinctus, *Hope* 294
24. dimidiatus, *Chevr.* 294
25. albomaculatus, *Allard*. 295
26. divisus, *Chevr.* 295
27. albicinctus, *Hope* 296
28. ascendens, *Pascoe* 296
29. formicoides, *Lameere*. . 297
30. maculicollis, *Gahan* . . 297
31. delesserti, *Chevr.* 298
32. persimilis, *Chevr.* 298
33. funebris, *Lameere* 299

Page
9. Psilomerus, *Chevr.* 299
1. angustus, *Chevr.* 300
2. bimaculatus, *Gahan* . . 300
3. hampsoni, *Gahan* 301
10. Oligoenoplus, *Chevr.* 301
1. ventralis, *Chevr.* 302
2. murinus, *Allard* 302
11. Aglaophis, *Thoms.* 303
1. humerosus, *Chevr.* 303
2. fasciatus, *Thoms.* 304
3. watsoni, *Gahan* 304

Group 18. Epipedocerini . 305

1. Epipedocera, *Chevr.* 305
1. zona, *Chevr.* 306
2. laticollis, *Gahan*. 307
3. affinis, *Chevr.* 307
4. undulata, *Hope* 307
2. Centrotoclytus, *Motsch.* . . 308
1. quadridens, *Motsch.* . . 308
2. carinatus, *Gahan* 309
3. Bicon, *Pascoe* 310
1. bimaculatum, *Gahan*. . 310
4. Halme, *Pascoe* 311
1. cinctella, *Gahan*. 311
2. cærulescens, *Gahan* . . 312
5. Clytellus, *Westwood* 312
1. olesteroides, *Pascoe* . . 313

Group 19. Cleomenini 313

1. Artimpaza, *Thoms.* 314
1. bicolor, *Pascoe*. 314
2. Dere, *White* 315
1. affinis, *Gahan* 316
2. fulvipennis, *Gahan*. . . . 316
3. apicalis, *Gahan* 316
3. Cleomenes, *Thoms.* 316
1. chryseus, *Gahan*. 317
4. Nida, *Pascoe* 318
1. flavovittata, *Pascoe* . . 318
2. andamanica, *Gahan* . . 319

Group 20. Glaucytini 319

1. Iresioides, *Thoms.* 319
1. moesta, *Pascoe* 320
2. brunnea, *Thoms.* 320
3. kraatzi, *Thoms.* 321
2. Polyphida, *Pascoe* 321
1. metallica, *Nonfried* . . 321

Order COLEOPTERA.

Suborder *POLYPHAGA.*

Superfamily **LONGICORNIA.**

Family CERAMBYCIDÆ.

Head obliquely inclined in front, sometimes subvertical, but with the genal edge always oblique or vertical, formed into a more or less distinct and often projecting angle behind the base of the mandible; clypeo-frontal sutures generally distinct, the clypeus as a rule relatively large. Last joint of palpi not pointed at the end. Front tibiæ not grooved underneath, the middle tibiæ, except in *Disteniinæ*, never notched nor grooved on the outer margin. Tarsal claws always simple; in the great majority of forms, widely divergent or divaricate.

This family, although comprising fewer specific forms than the *Lamiidæ*, is less homogeneous in character and probably contains as great a number of different genera. It appears to be on the whole the less specialised of the two, including as it does a much larger proportion of forms which have retained what may be regarded as primitive characters. But as these characters appear, some in one genus or group, some in another and never all together, the problem of determining the phylogenetic relationship of the various groups is one of the greatest difficulty, and the classification of the family remains for the present to a great extent artificial. The minor groups in which Lacordaire arranged the genera appear to me to be, with few exceptions, natural ones; and in dealing with the larger subfamilies I have, with certain modifications, adopted them here, but have not adhered to his sequence in the arrangement of the groups. The family, so far as it is represented in the present fauna, I have divided into four subfamilies, three of which correspond to the three main groups into which Ganglbauer has divided the European *Cerambycinæ*; the fourth subfamily is equivalent to Lacordaire's group *Disteniides* with the addition of two genera which he had placed elsewhere. The division is based to some extent on larval characters, which however are not given in the following synopsis.

Synopsis of Subfamilies.

A. Inner lobe of maxillæ obsolete or very small; gula without mentigerous process; prothorax marginate at sides; front coxæ strongly transverse . . . . *Prioninæ.*

B. Inner lobe of maxillæ more or less well developed; prothorax not marginate at sides; front coxæ rarely strongly transverse.

a. Head more or less elongated and either gradually or abruptly narrowed behind eyes; gula with a mentigerous process, which, as a rule, is very distinct; mandibles frequently provided with a ligamentous fringe and molar tooth at base; wing-vein Cu. 1 usually bifurcate behind and joined near middle to Cu. 2.

a'. Head very short in front; antennæ close to the base of the mandibles; front coxæ subglobular, with their acetabula rounded, or exceptionally slightly angulated on outer side . . . . *Disteniinæ.*

b'. Head longer in front; antennæ less close to base of the mandibles; front coxæ conical and prominent, with their acetabula more or less strongly angulated on outer side . . . . *Lepturinæ.*

b. Head variable in form, but seldom distinctly narrowed behind eyes; gula with or without a mentigerous process, this, when present, usually very short; mandibles never provided with a ligamentous fringe or molar tooth at base; wing-venation generally reduced by disappearance either of Cu. 2 or branch of Cu. 1 or of both, sometimes as complete as in *Lepturinæ*, but only in forms which have no distinct mentigerous process to the gula . . . . *Cerambycinæ.*

Subfamily I. PRIONINÆ.

Prionides, *Lacord. Gen. Coléopt.* viii, p. 16 (1869).
Prionidæ, *Bates, Biol. Centr.-Americana, Col.* v, p. 1 (1879).
Prionini, *Ganglb. (Bestim.-Tabell. Europ. Col.* vii), *Verh. z.-b. Ges. Wien*, xxxi, p. 684 (1882).

Inner lobe of maxillæ obsolete or very small; ligula corneous; mentum not covering base of maxillæ; gula without distinct mentigerous process. Antennæ usually inserted close to the base of the mandibles. Prothorax, except in a few species, marginate at the sides. Mesonotum, except in the single genus *Philus*,

without stridulatory area. Front coxæ strongly transverse, with their acetabula widely open behind. Wing-venation conforming generally to the type represented in fig. 6 Intro., in which vein A 1 has a rather large subelliptical cell in its course, and vein Cu. 1 is simple and not united with Cu. 2; exceptionally however (group *Philini*) vein Cu. 1 gives off one or two branches and is united by a cross-vein with Cu. 2.

From the subfamily as above defined two groups, sometimes placed in it, will have to be excluded. These groups—the *Parandrides* and *Anoplodermides*—may be regarded as distinct subfamilies, but as they are not represented in the Indian fauna it is unnecessary to characterise them here. The character by which the *Prioninæ* may be in practice most readily recognized is the possession by the prothorax of sharp lateral margins. These margins are usually distinguishable along the whole length of each side, running at a greater or less distance from the outer angles of the coxal cavities and from the prosternal sutures; they are sometimes entire but more frequently dentate or spinose, the spines or teeth sometimes large and few in number, sometimes small and forming a series; exceptionally the margins curve downwards from the base so as to run very close to the acetabula and prosternal sutures; in certain forms become obsolete or wholly disappear on the anterior half of each side; they are completely wanting in one species only among those dealt with in the present fauna.

This subfamily is represented in nearly all parts of the world, and includes many of the largest species of Coleoptera. In certain of the groups the eyes are finely facetted, and this character is frequently associated with the possession of metallic or other bright colours. So far as at present known, no species belonging to any of these groups occurs within our faunistic limits. In the Indian genera the eyes are always coarsely facetted, and the species, with one or two exceptions, are restricted in their range of coloration between black and those lighter shades of brown which verge on red and yellow.

Following the example set by Lacordaire in dealing with large subfamilies, I propose here to give first a synopsis of the different groups of genera, to be followed later by a synopsis of the different genera associated together in each group.

Synopsis of Groups.

A. Episterna of metathorax parallel-sided for the greater part of their length or nearly so; broadly truncate behind.

a. Prothorax with from one to four strong marginal teeth or spines on each side; prosternum not flat and horizontal behind.

a'. Tibiæ not spinose on outer margin; eyes distinctly emarginate; ligula bilobed or emarginate; antennæ of ♂ longer than half body.

a^2. First antennal joint one-third at least longer than broad; labrum not triangular. Group *Prionini.*

b^2. First antennal joint short, obconic, scarcely longer than broad; labrum triangular.... Group *Acanthophorini.*

b'. Tibiæ spinose on outer margin; eyes almost entire; ligula entire; antennæ of ♂ not longer than half body .... Group *Cantharocnemini.*

b. Prothorax with lateral margins entire or nearly so, or else provided each with a series of several teeth or spines.

a'. Lateral margins of prothorax entire or with only one small submedian tooth; first antennal joint short .... Group *Eurypodini.*

b'. Lateral margins of prothorax crenulate or pluridentate; first antennal joint long or moderately long .... Group *Macrotomini.*

B. Episterna of metathorax with posteriorly converging sides, narrowly truncate or obtusely pointed at apex.

a. Third joint of tarsi cleft almost to base; vein Cu. 1 of hind wings simple, not united with vein Cu. 2.

a'. Head sloping in front; antennæ inserted near base of mandibles .... Group *Ægosomini.*

b'. Head vertical in front; antennæ more or less distant from base of mandibles .... Group *Monodesmini.*

b. Third joint of tarsi cleft to middle only; vein Cu. 1 of hind wings branched, united by a cross-vein with vein Cu. 2 .... Group *Philini.*

Group *PRIONINI.*

The genera of this group are distinguished by having usually three teeth or spines on each side of the prothorax, the number being increased to four in one genus and reduced to one in another; the intercoxal process of the prosternum more or less strongly curved and sometimes subvertical behind, never in the form of a thin flat plate. The clypeus often more or less coriaceous in front; the labrum always distinct, sometimes narrow and more or less rectangular in form, sometimes semicircular and transverse, but never triangular. The antennæ variable in form, but with the first joint one-third at least longer than broad. The epimera of the metathorax prolonged behind so as to pass alongside the outer end of the coxæ. The legs sometimes asperate or scabrous, but never spinose. The paronychium small, but usually visible between the claws and in most of the genera setose at the end.

Except in one genus (*Logæus*) there is no strongly-marked sexual difference in the puncturation of the thorax, the sexes differ chiefly in the length of the antennæ and in the length and form of the mandibles.

Synopsis of Genera.

A. Mandibles long, curving downwards and backwards, narrowing towards apex.
  a. Antennæ subimbricate; lobes of third tarsal joint narrowed, usually spined at apex.
    a'. Marginal teeth of prothorax short; prosternum with strong anterior process in ♂.
      a^2. Only one distinct marginal tooth to prothorax; prosternal process of ♂ simple .... DORYSTHENES, p. 5.
      b^2. Three distinct marginal teeth to prothorax; prosternal process of ♂ bifid .... DISSOSTERNUS p. 7.
    b'. Marginal teeth of prothorax long and sharp; prosternum without anterior process .... BALADEVA, p 8
  b. Antennæ serrate but not imbricate; lobes of third tarsal joint rounded at apex.
    a'. Pronotum strongly convex; marginal teeth rather short .... LOPHOSTERNUS, p. 9.
    b'. Pronotum feebly convex; marginal teeth long and spiniform .... PARAPHRUS, p. 13.
B. Mandibles vertical or oblique, not recurved.
  a. Mandibles of moderate length and never falciform; third tarsal joint incompletely bilobed or simply emarginate.
    a'. Marginal teeth of prothorax short; tibiæ not carinate; antennæ of ♂ usually either imbricate, pectinate or flabellate .... PRIONUS, p. 14.
    b'. Marginal teeth of prothorax long and spiniform; tibiæ carinate and sulcate; antennæ serrate or subserrate
      a^2. Epipleures of elytra gradually and only slightly widened towards base.
        a^3. Antennal supports depressed; pronotum not tuberculate .... PRIONOMMA, p. 16.
        b^3. Antennal supports raised; pronotum bituberculate .... ANCYLOPROTUS, p. 18.
      b^2. Epipleures of elytra strongly widened out below shoulders .... LOGÆUS, p. 19.
  b. Mandibles long, very long and falciform in fully developed males; third tarsal joint completely bilobed .... PRIOTYRANNUS, p. 21.

Genus DORYSTHENES.

Dorysthenes, *Vigors*, *Zool. Journ.* ii, p. 514 (1826); *Lacord. Gen. Coléopt.* viii, p. 53 (1869).
Cyrtognathus, *Casteln. Hist. Nat. An. Art.* ii, p. 389 (1840).

Type, *D. rostratus*, Fab.

Range. India, Burma and Siam.

♂. Mandibles long, curved backwards below, gradually narrowed and only slightly incurved towards the tip. Antenniferous tubers

depressed, separated from each other by a channel which is very narrow in front, gradually widened behind. Antennæ scarcely reaching beyond the middle of the elytra, 12-jointed, with the third joint a little longer than the first and distinctly longer than the fourth, slightly produced and acute at the apex on the anterior side; fourth to eleventh successively shorter, produced each into an angulate process at the apex on the anterior side. Pronotum convex, somewhat transversely hexagonal in form, its sides produced each into a flat angular process at the middle, convergent thence towards the apex and also, but less strongly, towards the base; its front and hind angles rounded off. Elytra less than twice as long as broad, oblique at the shoulders, broadly rounded at the apex. Third joint of the middle and hind tarsi not cleft beyond the middle, each of its lobes narrowed to the apex and usually ending in a sharp spine; the fourth joint short but distinct, triangular in form, sometimes spined on each side at the end. Prosternum with a strongly projecting anterior process which is pointed at the end.

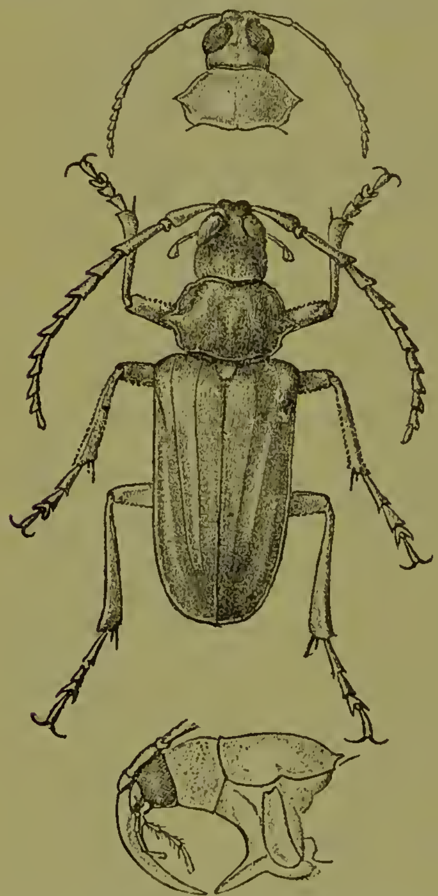


Fig. 1.—*Dorysthenes rostratus*, Fab., ♂, with dorsal view of head and prothorax of ♀, and side view of head and prothorax of ♂.

♀. Head and mandibles shorter; antennæ much shorter and more slender, with joints fifth to eleventh feebly serrate at the apex. Elytra widened in the middle. Anterior tarsi not dilated; first three joints of all the tarsi with a spine on each side at the apex. Prosternum with the anterior process very feebly developed.

1. **Dorysthenes rostratus**, *Fab.* (Prionus) *Ent. Syst.* i, 2, p. 243 (1792); *Oliv. Ent.* iv, no. 66, p. 36, pl. x, fig. 37 (1795); *Vigors* (Dorysthenes), *Zool. Journ.* ii, p. 516, pl. 19, figs. 4 & 5 *a* (1826); *Casteln.* (Cyrtognathus) *Hist. Nat. An. Art.* ii, p. 389 (1840); *Guér. Rev. Zool.* 1840, p. 40, pl. i, fig. 6.

♂. Head and elytra (except in slightly immature specimens) dark brown; prothorax (except at the edges), antennæ, legs, and underside reddish brown. Head impunctate and very shiny in front, sparsely punctured above between the eyes, more closely behind; closely granulate at the sides. Scape of antennæ barely reaching to the hind margin of the eye, the latter being large. Pronotum very glossy, nearly as long in the middle as it is broad at the base.

very sparsely punctulate except near the margins; with a broad but very shallow depression in the middle. Elytra glossy, each with two or three feebly raised costæ. Prosternal process long, not much wider at the base than in the middle, directed downwards and strongly forwards. Hind breast very densely covered with tawny pubescence. Last ventral segment sinuate at the apex. Front tarsi moderately dilated, with the first joint nearly twice as long as broad and distinctly longer than the second joint. Third joint of the middle and hind tarsi with a rather long spine at the end of each lobe.

♀. Broader than the male; the antennæ slender, scarcely reaching beyond the basal fifth of the elytra; all the tarsi narrow, the basal three joints all distinctly spined at the end. Last ventral segment with rounded hind margin.

Length 29–49; *breadth* 10–16 mm.

Hab. Mysore and Madras; (?) Siam.

2. **Dorysthenes montanus**, *Guér.* (Cyrtognathus) *Rev. Zool.* 1840, p. 39, pl. i, fig. 5.

♂. Almost entirely reddish brown in colour, the head only being dark brown. Eyes smaller than in *D. rostratus* and more distant from each other above, the scape of the antennæ reaching beyond their hind margin. Pronotum rather closely punctulate, not very glossy, its breadth across the base one-third greater than its length along the middle. Elytra only slightly glossy. Anterior process of prosternum very broad at the base, gradually narrowed to the apex, its front face almost vertical and its hind one inclined so as to lie nearly in the same plane as the posterior part of the prosternum. Front tarsi rather strongly dilated, much broader than the hind ones, the first joint but little longer than broad and a little longer than the second joint. Hind breast not very densely covered with tawny pubescence.

♀. Differs from the male as in *D. rostratus*.

Length 26–44; *breadth* 9–15 mm.

Hab. Southern India: Coonor, Nilgiris and Anaimalai Hills; (?) Burma.

Genus DISSOSTERNUS.

Dissosternus, *Hope, Proc. Zool. Soc.* i, p. 64 (1833); *id. Trans. Zool. Soc.* i, p. 106 (1834); *Lacord. Gen. Coléopt.* viii, p. 53 (1869).

Type, *D. pertii*, Hope.

Range. That of the type species.

♂. Head and mandibles as in *Dorysthenes*, but with the eyes smaller. Antennæ reaching considerably beyond the middle of the elytra, 12-jointed, the joints from the fourth to the tenth strongly compressed and produced each into an acute angle or tooth at the apex on the anterior side. Pronotum convex, each of its lateral angles produced into a strong tooth or spine at the middle and a shorter tooth between the middle and the front margin; its hind angles slightly projecting and feebly dentate.

Elytra almost twice as long as broad, rounded at apex. Prosternum with a strong, wedge-shaped, anterior process which is directed downwards and deeply notched in the middle at the extremity. Legs as in *Dorysthenes*, but with the fourth tarsal joint smaller and more noduliform.

3. **Dissosternus pertii**, *Hope, Trans. Zool. Soc.* i, p. 106, pl. 15, fig. 3 (1834).

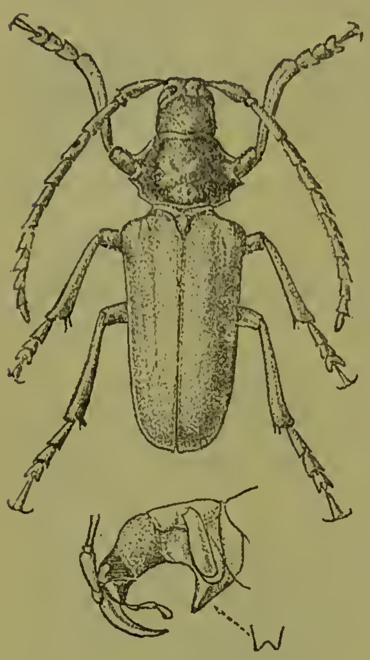


Fig. 2.
Dissosternus pertii, Hope, ♂.

♂. Blackish brown in colour, the elytra chocolate-brown. Head rather closely punctulate and very shiny in front, more closely and strongly punctured above, the punctures replaced by granules behind and at the sides. Eyes rather small, broadly and somewhat deeply emarginate in front. Antennæ: the first six joints glossy and sparsely punctulate, the rest dull; first joint reaching by about a third of its length beyond the hind margin of the eye; third a little longer than the first, shorter than the fourth and fifth united. Pronotum glossy, finely and rather sparsely punctured. Scutellum sparsely punctured. Elytra rugulose, with scarcely any gloss. Hind breast faintly pubescent. Front tarsi moderately dilated, with the first joint distinctly longer than the second. Third joint of the middle and hind tarsi with a short spine or tooth at the end of each lobe. Last ventral segment sinuately truncate at the apex. Female not known.

Length 25–28; *breadth* 8–10 mm.

Hab. Poona.

Genus **BALADEVA**.

Baladeva, *Waterh. Trans. Ent. Soc.* ii, p. 225 (1840).
Cyrtognathus (part.), *Lacord. Gen. Coléopt.* viii, p. 52 (1869).

Type, *B. walkeri*, Waterh.

Range. That of the type species.

In the structure of the head, antennæ, and legs very closely resembles the genus *Dorysthenes*. Prothorax armed with three spines on each side, the longest at the middle, the shortest at the hind angle; the lateral edge in front of the anterior spine short and strongly oblique. Elytra: the shoulders oblique in front, projecting slightly outwards and turned up at the angle. Intercoxal part of the prosternum strongly raised in the middle, vertical and unarmed in front, curved behind, its end resting on the mesosternum.

4. **Baladeva walkeri**, *Waterh. Trans. Ent. Soc.* ii, p. 226, pl. 21, fig. 1 (1840).

♂. Dark brown or almost black in colour; the back of the head, the prothorax, and the underside more or less reddish. Head feebly and sparsely punctulate above, somewhat granulate at the sides; mandibles very long and, in well-developed specimens, armed with a tooth on the outer margin near the middle. Antennæ not reaching to the middle of the elytra; first joint reaching to the hind margin of the rather broad eye. Pronotum glossy, very minutely punctulate. Elytra rugulose and more or less nitid. Tibiæ of the front and middle legs strongly asperate, or subspinose beneath; front tarsi somewhat dilated, the first joint longer and narrower than the second or third. Hind breast with a faint tawny pubescence at the sides, a triangular area in the middle naked and glossy. Last ventral segment sinuate and slightly depressed, at the apex.

♀. With much shorter head, and shorter and more slender antennæ, than the male; the legs also shorter, smooth, the front tarsi very little broader than the hind tarsi. Pronotum more deeply punctulate than in the male and not so glossy. Hind breast without pubescence. Last ventral segment rounded at the apex.

Length 38–79; *breadth* 15–29 mm.

Hab. Burma; Siam.

Genus LOPHOSTERNUS.

Lophosternus, *Guér. Icon. Règne Anim., Ins.* p. 209 (1844).
Cyrtosternus, *Guér. Icon. Règne Anim., Ins.* p. 210 (1844).
Cyrtognathus (part.), *Lacord. Gen. Coléopt.* viii, p. 53 (1869).

Type, *L. buqueti*, Guér.

Range. Oriental Region.

♂. Head elongated behind the eyes, short in front; mandibles long, curved downwards and backwards, crossing when closed, their inner edges sharp; palpi long, the labial equal in length to the maxillary; antennal tubers depressed, separated by a more or less deep channel; eyes emarginate in front. Antennæ usually shorter than the body, 11-jointed; the first joint slightly curved, reaching to the hind margin of the eye or a little beyond; the third longer than the first; the fifth to the tenth, and sometimes also the third and fourth, produced into a sharp angle or tooth at the apex on the anterior side; the fourth to the tenth each much shorter than the third; eleventh with a very distinct appendix divided off by a transverse carina and projecting angle. Prothorax transverse, convex above, its lateral edge oblique and often denticulate in front, produced into a spine at the middle, into another spine between the middle and front margin, and sometimes sharply angulated or toothed near the base. Elytra

more than twice as long as broad, slightly narrowed behind, rounded at the apex, often with a small spine on each at the suture. Legs long, the anterior two pairs more or less asperate underneath; tarsi elongated, the first joint as long as the second and third together; third joint bilobed, the lobes rounded at the end. Intercoxal part of prosternum strongly arched up in the middle, curved down behind, its end resting on the mesosternum. Last ventral segment slightly sinuate at the apex.

♀. Head and mandibles shorter. Antennæ much shorter, more slender and less strongly serrate. Pronotum shorter, its antero-lateral spine nearer to the front margin, the lateral edge in front of it more oblique. Last ventral segment with rounded hind margin.

5. **Lophosternus indicus,** *Hope* (Prionus), *Gray's Zool. Misc.* p. 27 (1831).

Lophosternus (Cyrtosternus) hopei, *Guér. Icon. Règne Anim., Ins.* p. 210 (1844).

♂. Dark brown or almost black in colour. Head coarsely punctured; eyes rather narrow, the upper lobe at a distance of at least half its own width from the antennal tuber. Antennæ from three-fourths to five-sixths of the length of the body; first joint reaching to a short distance beyond the hind margin of the eye; third slightly dilated, but not sharply angulate at the apex: fourth slightly acute at the apex, fifth to tenth produced into an acute angular process at the apex on the anterior side. Pronotum closely and finely punctured in front and for some distance back along each side of the middle line, closely but more strongly punctured at the sides; hind angles more or less obtuse, often rounded off. Elytra more or less rugulose and punctate, with the little ridges closely and finely punctulate. Hind breast bare of pubescence.

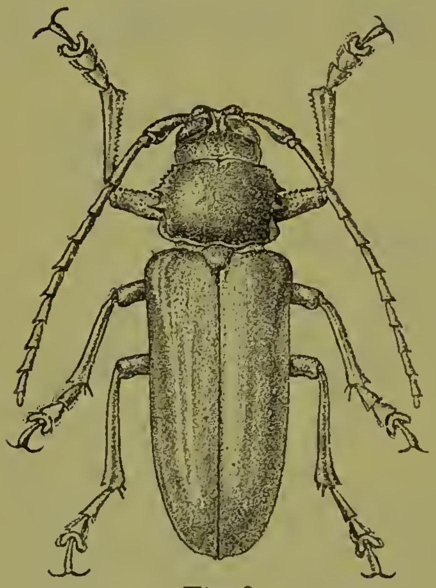


Fig. 3.
Lophosternus indicus, Hope, ♂.

♀. Antennæ reaching only to the middle of the elytra, much more slender than in the male. Last ventral segment with rounded hind margin. Legs smooth underneath.

Length ♂ ♀ 25–50 mm.

Hab. Nepal; Bhutan; Sikhim.

6. **Lophosternus zivetta**, *Thoms.* (Cyrtognathus) *Rev. et Mag. Zool.* 1877, p. 263.

♂. Dark brown in colour. Head closely but not very strongly punctured. Eyes rather large, the upper lobe of each at a distance of less than half its own width from the antennal tuber. Antennæ reaching to the middle of the elytra or a little beyond; first joint barely reaching beyond the hind margin of the eye; third to tenth produced each into a sharp angle or tooth at the apex on the anterior side. Pronotum rather closely punctured at the sides, less closely in front and sparsely along the middle; its base with a rather deep sinuate emargination on each side and a distinct lobe in the middle; its hind angles projecting and acute. Elytra subnitid, finely but somewhat sparsely punctured, the interstices very minutely rugulose. Hind breast covered with a tawny pubescence, giving silky reflexions in certain lights. Last ventral segment subtruncate behind.

♀. Antennæ less than half as long as the body, more slender than in the ♂, the joints from the fifth to the tenth becoming successively shorter and broader, produced each into a sharp angle or tooth at the apex. Hind breast bare of pubescence. Last ventral segment with rounded hind margin. Legs smooth underneath.

Length 25–40 mm.

Hab. Himalayas, North India.

7. **Lophosternus socius**, sp. n.

♂. Dark brown in colour. Head closely but not very coarsely punctured above; last joint of palpi widest at about two-thirds from the base, narrowed again towards the extremity; upper lobe of each eye moderately broad. Antennæ reaching to the posterior third of the elytra; first joint reaching to a little beyond the hind margin of the eye; third and fourth not sharply edged in front and not produced at the apex, fifth to tenth produced in a short triangular tooth at the apex on the anterior side. Pronotum sparsely punctured, the punctures in the middle somewhat finer than those at the sides; its hind angles obtuse. Elytra finely rugulose and sparsely but rather strongly punctured, with the interstices minutely punctulate. Hind breast covered with a tawny pubescence. Last ventral segment sinuate at the apex.

Length ♂ 44; *breadth* $14\frac{1}{2}$ mm.

Hab. Manipur (*Doherty*).

8. **Lophosternus hugelii**, *Redtenb.* (Cyrtognathus) *Hügel's Kaschmir*, iv, 2, p. 550, pl. 28, fig. 1 (1848).

♂. Chestnut-red in colour, the head and prothorax somewhat darker than the elytra, the front and hind margins of the pronotum almost black. Head strongly and closely punctured.

Last joint of palpi gradually widened towards the extremity. Eyes large, the upper lobes rather closely approximated to the antennal tubers in front. Antennæ a little shorter than the body; first joint not reaching beyond the hind margin of the eye, third to tenth acutely produced at the apex on the anterior side, third with sharp anterior edge near which it is finely and very closely punctulate. Pronotum finely and closely punctured in front and for some distance back along each side of the middle line, more strongly punctured towards the sides; its hind angles more or less obtuse, sometimes slightly projecting. Elytra rugulose, the ridges finely punctured; each with two or three feebly raised obtuse costæ. Hind breast covered with a tawny-coloured silky pubescence. Last ventral segment sinuate at the apex.

♀. Antennæ hardly reaching to the middle of the elytra, more slender than in the male, the joints, from the fifth only, acutely angulate at the apex. Hind breast bare of pubescence. Last ventral segment with rounded hind margin. Legs smooth underneath.

Length ♂ ♀ 29–53 mm.

Hab. Kashmir; N.W. Provinces; Punjab; Assam.

9. **Lophosternus falco**, *Thoms.* (Cyrtognathus) *Rev. et Mag. Zool.* 1877, p. 262.

♂. In colour and sculpture greatly resembles the same sex of *L. hugeli*, Redt.; the chief points of difference are as follows:— Eyes slightly narrower, the upper lobes less closely approximate in front to the antennal tubers; antennæ a little longer, reaching almost to the apex of the elytra; elytra relatively shorter, less strongly rugulose, their costæ broader and more obtuse. (Female not known.)

The author of this species, when describing it, compared it with *C. paradoxus*; but the specimen in his collection labelled *paradoxus* is one of *L. hugeli*, Redt., and not the true *paradoxus* of Falderman, which is a species from Mongolia in nowise closely related to it.

Length ♂ 30–69 mm.

Hab. Darjeeling.

10. **Lophosternus palpalis**, sp. n.

♂. Closely resembles the same sex of *L. hugeli*, Redt., but differs as follows:—Last joint of palpi more triangular in form, widest at the extremity; eyes narrower, the upper lobe at a distance equal to about half its own width from the antennal tuber; antennæ shorter, scarcely reaching to the posterior third of the elytra, the first joint reaching a little beyond the hind margin of the eye; hind angles of the pronotum acute or subdentate.

Length ♂ 40 mm.

Hab. Himalayas (in *coll. Oberthür*).

11. **Lophosternus buqueti**, *Guér. Icon. Règne Anim., Ins.* p. 209 (1844).

♂. Chestnut-red in colour, the head somewhat darker than the prothorax and elytra. Head closely and rather strongly punctured above; last joint of palpi widest at about one-fourth from the apex; eyes very large, narrowly and not very deeply emarginate, the upper lobe extending forward to the antenniferous tuber. Antennæ nearly as long as the body; first joint reaching by about one-fifth of its length beyond the hind margin of the eye, third almost rectangular at the apex, fourth acute at the apex, fifth to tenth produced each into a sharply angulate process at the apex. Pronotum closely punctured at the sides, sparsely elsewhere; hind angles slightly projecting but scarcely acute. Elytra rather strongly punctured, the interstices rugulose and finely but not very closely punctulate; each with two obtuse and feebly raised costæ. Hind breast covered with tawny pubescence. Last ventral segment with a feeble sinuate emargination at the apex.

Length 26–38; *breadth* 9–13 mm.

Hab. Sylhet and Khasi Hills in Assam; Salween Valley and North Chin Hills in Burma; Canara in S. India; Java.

12. **Lophosternus similis**, sp. n.

♂. Very like the same sex of *L. buqueti*, Guér., with which it agrees in colour, form and sculpture, but differs as follows:— Eyes smaller, more deeply emarginate in front, the upper lobe not continued forward quite to the antenniferous tuber. Scape of antennæ extending by nearly one-third of its length beyond the hind margin of the eye.

Length ♂ 34; *breadth* 11 mm.

Hab. Ruby Mines district, Burma.

Genus PARAPHRUS.

Paraphrus, *Thoms. Essai Class. Ceramb.* p. 330 (1861).
Cyrtognathus (part.), *Lacord. Gen. Coléopt.* viii, p. 51 (1869).

Type, *P. granulosus*, Thoms.

Range. N. India to Borneo.

♂. Head and mandibles as in *Lophosternus*, but the antenniferous tubers more approximated to each other in front, there separated only by a narrow linear groove. Antennæ as long as or longer than the body, finely denticulate underneath, 12-jointed, the third joint almost twice as long as the first or fourth, fifth to eleventh produced each into a sharply angular process at the apex on the anterior side. Prothorax strongly transverse, only slightly convex or almost flat above, armed on each side with three spines, the posterior spine much the shortest and the lateral edge in front of the anterior spine strongly oblique. Elytra less than twice as long as broad, rounded at the apex, sometimes

feebly dentate at the suture. Third joint of the tarsi more or less deeply bilobed, the lobes rounded at the end. Other characters almost as in *Lophosternus*.

♀. Antennæ shorter than the body, more slender than in the ♂, and not denticulate underneath. Legs smooth. Abdomen rounded at the apex.

13. **Paraphrus granulosus**, *Thoms.* (Cyrtognathus) *Essai Class. Ceramb.* p. 329 (1861).

♂. Brick-red in colour, the head and antennæ sometimes inclining to dark brown; prothorax and elytra almost entirely opaque. Head nitid and very sparsely punctured in front; upperside rugosely punctate and opaque. Antennæ: the first five or six joints more or less nitid above, somewhat asperate underneath; the first three or four sparsely punctate and the last six or seven densely rugulose-punctate and opaque. Pronotum finely and very closely punctured over its whole area. Elytra somewhat rugulose, closely and very finely punctulate. Hind breast pubescent. Last ventral segment with an arcuate emargination at the apex. Front and middle legs asperate underneath. Third joint of tarsi with its cleft extending three-fourths of the way to the base, and its lobes obtusely rounded at the end.

Variation. In some small males the pronotum has two nitid or sub-nitid spaces near the middle and another, transverse, at the base, these spaces being much more finely and less closely punctured than the rest of the surface.

♀. Form and colour of ♂. Antennæ shorter than the body, more slender than in the male, and not denticulate or scabrous underneath. Legs smooth. Last ventral segment rounded at apex. Hind breast less densely pubescent.

Length ♂ ♀ 33–65; *breadth* 11–25 mm.

Hab. Mungphu in Sikhim (*Atkinson Coll.*); Burma: Thayetmyo, Moulmein, N. Chin Hills (*Watson*), Thaungyin Valley (*Bingham*), Kakhien Hills (*B. L. Stanton*); Siam.

Genus PRIONUS.

Prionus, *Geoffroy, Hist. Ins. de Paris*, i, p. 198 (1762).

Type, *P. coriarius*, Linn. European.

Range. Europe, Western and Northern Asia, Japan, and North America.

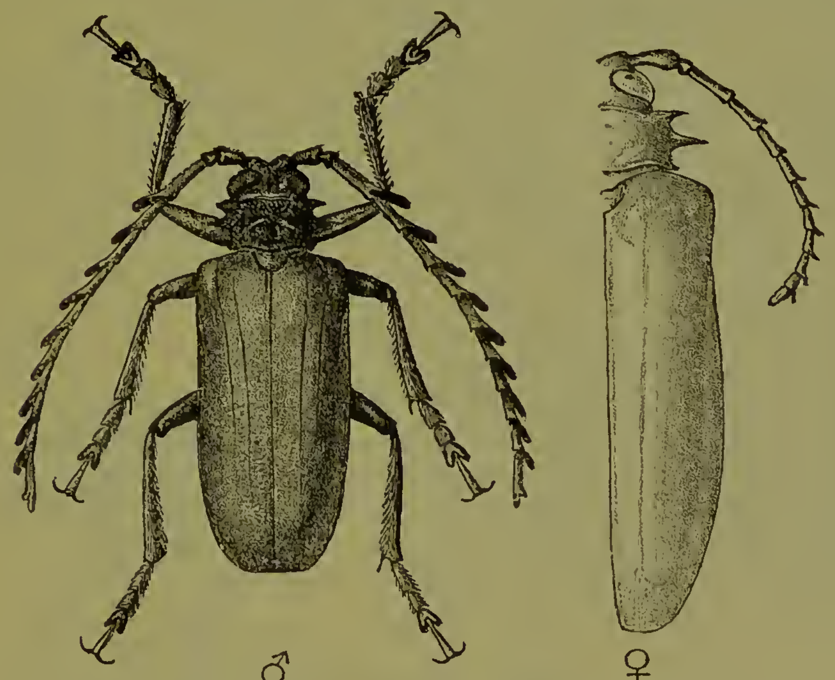
♂. Head short, transverse, more or less concave in front; mandibles stout, rather short, vertical, abruptly incurved and acute at the tip, with or without a tooth on the inner edge; palpi moderately long, the labial somewhat shorter than the maxillary. Eyes rather large, reniform. Antennæ at least three-fourths the length of the body, with twelve or more joints; first joint rather short, third the longest; the joints from the third or fourth to the

eleventh pectinate, or flabellate, and more or less imbricate. Prothorax strongly transverse, with from one to three teeth or spines on each side. Elytra of variable length, more or less parallel-sided, rounded at the apex, armed or not with a small spine or tooth at the suture. Legs stout and moderately long, laterally compressed; tibiæ asperate; first tarsal joint longer than the second, the third cleft to the middle or to within one-third from the base. Last ventral segment sinuate at the apex.

♀. Antennæ shorter and not so thick as in the male, the last six or seven joints serrate. Abdomen often projecting beyond the tip of the elytra, its last ventral segment usually rounded at the apex.

14. **Prionus corpulentus**, *Bates, P. Z. S.* 1878, p. 720, ♀; *id. Scientific Results Second Yarkand Mission, Coleopt.* p. 21, pl. i, fig. 18, ♀ (1890).

♂. Pitchy brown in colour. Head very closely and somewhat rugosely punctured. Eyes large, the lower lobes approximated to the base of the mandibles in front; the upper lobes



♂ ♀

Fig. 4.—*Prionus corpulentus*, Bates. × $\frac{6}{5}$.

not widely separated from each other above. Antennæ a little longer than the body, 12-jointed, each of the joints from the third to the eleventh produced antero-distally into a very long process; third joint twice as long as the first and about half as long again as the fourth, fourth to eleventh subequal in length, twelfth longer than the eleventh. Pronotum much broader than

long, bispinose at each side, very closely, rugosely punctured, dull, but with two small slightly raised spaces near the middle which are sparsely punctured and glossy. Elytra more than twice as long as broad, dull and somewhat coriaceous in appearance, finely rugulose and very minutely punctulate. Thorax underneath rather thickly covered with longish tawny hairs, shorter hairs of the same colour being less thickly spread on the tarsi and tibiæ; abdomen with very short, sparsely scattered hairs. Last ventral segment sinuate at the apex.

♀. Antennæ much shorter, joints third to eleventh serrate instead of flabellate. Elytra slightly expanded below the middle. Abdomen glabrous and more highly polished; the last ventral segment with rounded hind margin.

Length 33–46; *breadth* 11–17 mm.

Hab. Murree; Kashmir.

15. **Prionus elliotti**, sp. n.

♂. Black above; antennæ, legs and body underneath pitchy brown; tarsi reddish brown. Head closely punctured, impressed with a median groove, which is finer and less distinct behind. Antennæ scarcely extending beyond the middle of the elytra, 12-jointed, joints third to eleventh each with a long process projecting obliquely in front from the apex; third about one-third longer than the first and twice as long as the fourth, its process half as long as the joint itself; fourth to eleventh subequal in length, the ramus of each much longer than the stem; twelfth joint nearly twice as long as the eleventh. Prothorax closely punctured; with two spines on each side—one short, at the anterior angle, the other long and slightly recurved just before the middle. Elytra less than twice as long as broad, densely rugulose and somewhat sparsely punctured. Breast thickly covered with long greyish hairs; the abdomen with some shorter sparsely scattered hairs. First joint of front tarsus longer than the second, that of the hind tarsus almost as long as the second and third united; third joint of hind tarsus cleft to the middle.

Length 33; *breadth* 13 mm.

Hab. Baluchistan: near Quetta (*C. Elliott*).

Genus PRIONOMMA.

Prionomma, *White, Cat. Coleopt. B. M., Longic.* i, p. 19 (1853); *Lacord. Gen. Coléopt.* viii, p. 58 (1869).

Type, *P. atratum*, Gmelin.

Range. That of the type species.

♂. Head short and broad; the clypeus deeply depressed, bounded above by an arcuate groove; antenniferous tubers flat, separated by a narrow but deep median groove, which is continued along the vertex between two prominent supraorbital carinæ; eyes

large, reniform; genæ small, sharply angulate below; mandibles strongly incurved below, acute at tip, each with a strong sub-median tooth on the inner side. Antennæ nearly as long as the body, 11-jointed; first joint short, obconical, less than twice as long as broad, third to tenth rather broad, strongly serrate in front, dentate behind at the apex, each carinate above with an oblique poriferous face in front of the carina; eleventh with a transverse carina and projecting tooth near the middle. Pronotum transverse, convex, armed on each side with two strong, sharp spines—one at the front angle, the other, longer and slightly recurved just before the middle, its hind angles slightly projecting and acute. Elytra less than twice as long as broad, rounded at the apex; the lateral edge is slightly turned up and forms a narrow channel along each side. Prosternum prolonged almost horizontally behind in a freely projecting, obtusely pointed process. Last ventral segment sinuate in middle at the apex. Legs rather long; tibiæ canaliculate along each face close to the outer, or dorsal edge; tarsi long and narrow, especially on the hind legs, with the third joint cleft to the middle, its lobes narrow.

♀. Legs and antennæ shorter and narrower, the latter less strongly serrate than those of the male. Last ventral segment rather long, narrowed behind, rounded at the apex.

16. **Prionomma atratum**, *Gmelin* (Prionus), *Syst. Nat.* (i) 4, p. 1818 (1789).
Prionus orientalis, *Oliv. Ent.* iv, no. 66, p. 28, pl. 13, fig. 51 (1795).
Prionus tranquebaricus, *Fab. Ent. Syst. Suppl.* p. 141 (1798).
Prionomma orientalis, *White, Cat. Coleopt. B. M., Longic.* i, p. 19, pl. 1, fig. 3 (1853).

Fig. 5.
Prionomma atratum, Gmelin, ♂.

♂. Black or brownish black in colour. Head glossy, sparsely punctured. Antennæ reaching to the apical third or fourth of the elytra; first joint nitid, sparsely punctured, third to ninth nitid above, except in the poriferous areas lying anterior to the dorsal carinæ, third twice as long as the first and about half as long again as the fourth. Pronotum very glossy, almost impunctate in the middle, sparsely punctured near the sides. Elytra very feebly and sparsely punctured, with little or no gloss. Hind breast covered with a rather long brownish-tawny pubescence. Tibiæ and the anterior four femora asperate at their ventral edges.

♀. Legs and antennæ shorter

and narrower; the legs not asperate. Elytra distinctly and rather closely punctured, more or less rugulose. Last ventral segment with rounded hind margin. The hind breast pubescent as in the male.

Length 25-38 mm.

Hab. Ceylon; Southern India.

Genus ANCYLOPROTUS.

Ancyloprotus, *White, Cat. Coleopt. B. M., Longic.* i, p. 19 (1853); *Lacord. Gen. Coléopt.* viii, p. 57 (1869).

Type, *A. bigibbosus*, White.

Range. Assam, Manipur, Burma, and Java.

Very closely related to *Prionomma*, the chief characters that distinguish it are as follows:—Mandibles abruptly turned in below, with their lower border almost straight instead of curved; left mandible expanded inwardly between the middle and the tip

Fig. 6.—*Ancyloprotus bigibbosus*, White, ♂, and front view of head.

into a broad blade with a sharp and nearly straight edge. Antenniferous tubers united in front, divided above by a groove which widens out behind into a broad channel lying between the eyes. Antennæ much narrower than in *Prionomma* and less strongly serrate; first joint subcylindrical, more than twice as long as broad, equal in length to the fourth joint. Pronotum with a hump on each side of the middle. Elytra twice as long as broad.

17. **Ancyloprotus bigibbosus**, *White, Cat. Coleopt. B. M., Longic.* i, p. 19, pl. 1, fig. 4 (1853).

♂. Black or very dark brown in colour. Head sparsely punctured and subnitid in front, closely granulated and dull behind. Antennæ a little shorter than the body; first joint reaching to the hind margin of the eye, sparsely punctured and nitid; third to fifth sparsely punctured and glossy along the middle above, dull on the poriferous areas along the edges; last six joints almost entirely poriferous and opaque, marked with some fine longitudinal or reticulated carinæ. Pronotum sparsely punctured, with the interstices minutely punctulate or rugulose; feebly, or not at all nitid, except on the two dorsal humps which are smooth and glossy. Elytra very finely rugulose or granulate, for the most part dull; sparsely punctured and subnitid near the base. Hind breast covered with tawny pubescence. Last ventral segment feebly sinuate at the apex. Tibiæ of the first two pairs strongly and the femora less strongly asperate; front tibiæ rather strongly curved.

♀. Antennæ reaching to the apical third of the elytra, much narrower than those of the male and less serrate. Dorsal humps of prothorax narrower and more glossy than in the male, the rest of the pronotum more opaque. Hind breast pubescent as in the male. Last ventral segment with rounded hind margin.

Length 34–50; *breadth* 11–18 mm.

Hab. Assam; Manipur; Burma.

Genus LOGÆUS.

Logæus, *C. O. Waterhouse, A. M. N. H.* (5) vii, p. 458 (1881).

Type, *L. subopacus*, C. O. Waterh.

Range. Southern India.

♂. Head with the antennal supports divergent, separated by a rather broad deep channel that extends from the clypeus on to the vertex; clypeus depressed, limited above by an arcuate suture; labrum transverse; mandibles abruptly incurved towards apex, with broad inner tooth near apex of left mandible and triangular dilation at base of right; labial palpi short, with last joint stout, ovate. Eyes emarginate, upper lobes not very widely separated from one another. Antennæ as long as the body; first joint stout, reaching a little past the eye, third thickened, somewhat prismatic in form, one-third longer than the first; fourth one-third shorter than the third; fifth to tenth successively and gradually shorter, acutely angulate anteriorly at the apex; eleventh nearly twice as long as the tenth, one-half of it consisting of a very distinct appendix. Prothorax transverse, with a strong laterally produced spine at the front angle; a strong slightly recurved spine at the middle with a smaller spine or tooth arising from its front edge near the base and a short tooth at the hind angle on each side; notum feebly convex, finely and densely punctate and opaque, but

with a basal band and spaces on the disk coarsely punctate and subnitid. Elytra broadly rounded, slightly truncate at the apex; epipleures distinct, strongly dilated at the base, the upper edge there directed being towards the shoulder. Legs moderately long; front femora and tibiæ densely but rather finely asperate; all the tibiæ canaliculate. Intercoxale of prosternum raised, sub-horizontal and parallel-sided behind, vertically deflexed at the end.

♀. Antennæ much shorter than the body, smooth, nitid; third joint not thickened. Pronotum more convex, nitid, coarsely and somewhat unevenly punctured, with two obtuse elevations on each side near the middle and three smaller elevations placed transversely near the base.

18. **Logæus subopacus**, *C. O. Waterhouse, A. M. N. H.* (5) vii, p. 458 (1881).

♂. Black, with the elytra, legs and abdomen pitch-brown. Head rugulose, punctate. First joint of antennæ canaliculate above near the base and for nearly its whole length underneath; third joint rather densely, the succeeding joints sparsely,

Fig. 7.—*Logæus subopacus*, Waterh., ♂ ♀.

asperate underneath, poriferous spaces occupy almost all the surface except the dorsal faces of joints third to sixth. Pronotum with two angulated, coarsely punctured, subnitid spaces, widely separated from one another near the middle, these joined behind

to the ends of a transverse basal band that is dilated to form an anterior angle in the middle; two additional less nitid spaces on each side placed obliquely one before, the other behind the middle; rest of the surface finely and very closely punctured and dull. Elytra minutely coriaceous, rather dull, finely and very sparsely punctured near the base, armed each with a very small apical spine at the sutural angle. Metathorax and hind coxæ closely and rather finely punctured, densely covered with reddish-brown pubescence. Hind tarsi longer and narrower than the middle ones, these longer and narrower than the front ones; third joint cleft halfway in the hind tarsi, and more than halfway to the base in the front and middle tarsi. Last ventral segment broadly sinuate at the apex.

♀. More of a reddish-brown colour, especially on the elytra and antennæ. Antennæ smooth, nitid; the third joint sparsely punctured, the succeeding joints almost impunctate. Elytra subnitid. Metathorax and hind coxæ punctured almost as in the male, but less densely pubescent. Palpi like those of the male, with the last joint of the labial as strongly thickened. Last ventral segment rounded at apex.

Length 44–54; *breadth* 15–20 mm.

Hab. Travancore; Nilgiri Hills.

Genus **PRIOTYRANNUS.**

Priotyrannus, *Thoms. Archiv. Ent.* i, p. 120 (1857).

Type, *P. mordax*, White.

Range. Southern India.

♂. Head large, broadly concave between the antenniferous tubercles; clypeus bounded behind by an arcuate groove; eyes deeply emarginate, with the upper lobes rather narrow; mandibles dimorphic, either (1) long and sickle-shaped with a wide cordate space between them when closed, armed each with one large and a few smaller teeth close to the tip, or (2) like those of the female. Antennæ longer than the body, 11-jointed; first joint stout, subcylindrical, nearly twice as long as broad, third and succeeding joints finely punctulate and opaque, fifth to tenth furnished each with a small tooth at the apex. Pronotum strongly transverse, with three spines on each side, the first near the front angle, the second and longest at the middle, the third at the hind angle; anterior margin rounded in the middle, sinuate at each side, projecting forward in a small spine or tooth at the point where it joins the lateral edge. Elytra much less than twice as long as broad, rounded at the apex. Prosternum very short and strongly sloping in front of the coxæ, the intercoxale rather strongly arched. Legs long; femora compressed, somewhat parallel-sided; tarsi long, with the first joint longer and narrower than the second or third, the third deeply bilobed, the claw-joint as long as the first two together. Last ventral segment sinuate at the apex.

♀. Antennæ nitid, shorter than the body. Mandibles toothed along the inner edge, touching or overlapping along their whole length when closed. Last ventral segment with rounded hind margin.

19. **Priotyrannus mordax**, *White* (Prionus), *Cat. Coleopt. B. M., Longic.* i, p. 18 (1853); *Thoms.* (Priotyrannus) *Archiv. Ent.* i, p. 121, pl. 10, fig. 1 ♂ (1857).

♂. Dark brown in colour, for the greater part dull. Head strongly, rugosely punctured; mandibles oblique, closely punctured. Antennæ with the first joint subnitid, thickly and rather strongly punctured; the third and following joints very minutely granulate, entirely opaque, each with a cariniform anterior edge and most of them furnished also with a number of very fine, longitudinal carinæ above; third joint a little longer than the first and about one-third longer than the fourth. Pronotum coarsely punctured all over like the head. Scutellum rugosely punctured. Elytra very finely and closely granulated and dull, except near the base; the base coarsely punctured and somewhat shiny near the suture, also at and around the shoulder. Hind breast pubescent.

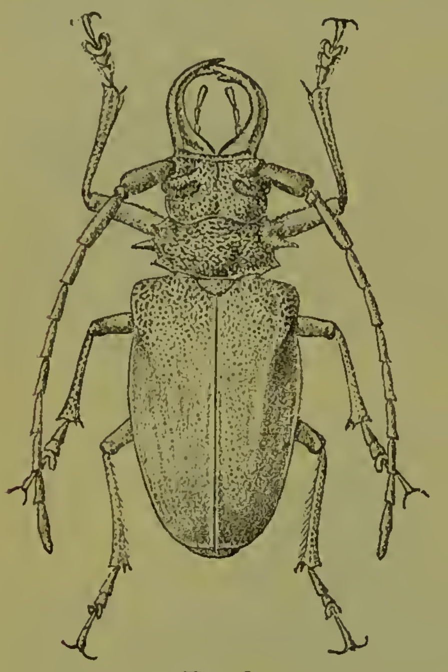


Fig. 8.
Priotyrannus mordax, White, ♂.

♀. Antennæ shorter than the body, with the third and a few of the following joints shiny above. Last ventral segment rounded at the apex.

Var. *rufescens*. Elytra fulvous-red in colour, rugosely punctured, somewhat shiny across the whole of the basal area.

Length 22–44; *breadth* 8–17 mm.

Hab. Nilgiri and Anaimalai Hills; Canara, Travancore; Bombay.

Group *ACANTHOPHORINI.*

This group was formed by Lacordaire for three very closely related genera, only one of which is included in the present fauna, the other two are restricted in their range to the African region. Lameere regards all three as constituting but a single genus, which he places in the group *Prionini*. From the genera of that group, *Acanthophorus* differs as follows :—The first joint of the antennæ relatively very short and thick, the labrum triangular and the

mandibles projecting forwards almost horizontally in both sexes. The clypeus not coriaceous in front, but the suture between it and the labrum distinct. The legs are smooth, and the third tarsal joint is completely bilobed. The wing-venation in *Acanthophorus* resembles that of *Dorysthenes* and most *Prioninæ*, but in *Tithoes*, its African representative, there is a cross-vein uniting vein Cu. 2 with Cu. 1.

Genus **ACANTHOPHORUS.**

Acanthophorus, *Serville, Ann. Soc. Ent. Fr.* i, p. 152 (1832) ; *Lacord. Gen. Coléopt.* viii, p. 69 (1869).

Type, *A. serraticornis*, Oliv.

Range. India, Southern Arabia, East and South Africa.

♂. Head short, broad, oblique in front; clypeus depressed in the middle, slightly raised at the sides, bounded behind by an arcuate groove; the interocular space above it bounded on each side by a more or less prominent supra-orbital ridge; antenniferous tubercles widely separated; mandibles long, directed forwards, carinate above, and either (1) curved almost from the base leaving a narrow space between them in the middle when closed, or (2) straight at the base, and incurved from the middle to the tip; in the first case armed each with three or four teeth beyond the middle, in the second with a series of teeth along the inner edge. Antennæ shorter than the body, 11- or 12-jointed; first joint stout, scarcely longer than broad; third three times as long as the first; the fifth and following joints, except the last, more or less strongly toothed at the apex on the anterior side. Pronotum strongly transverse, with three spines on each side, the second the longest and placed a little before the middle. Elytra twice as long as broad, rounded at the apex. Intercoxale of prosternum nearly horizontal behind, narrowed towards the end, where it rests on the mesosternum. Last ventral segment sinuate at the apex. Legs moderately long; femora stout, widest at or before the middle; tarsi rather broad, with the third joint deeply bilobed; first joint of the front tarsus scarcely longer than the second, that of the hind tarsus nearly as long as the second and third united.

♀. Mandibles shorter than those of the male and always of the second male form. Antennæ scarcely reaching beyond the middle of the elytra. Last ventral segment rounded at the apex.

20. **Acanthophorus serraticornis**, *Oliv.* (Prionus) *Ent.* iv, no. 66, p. 14, pl. 9, fig. 33 (1795) ; *Serville* (Acanthophorus), *Ann. Soc. Ent. Fr.* i, p. 153 (1832).

♂. Reddish tawny in colour, with the head, the basal half of the antennæ and the pronotum black or brownish-black. Head

nitid and sparsely punctured in front and between the supra-orbital carinæ, very closely punctate or granulate and opaque behind; eyes large, not very widely separated above, the space between them rather less than a third of the whole width of the head; mandibles variable in size and form. In large specimens they are longer than the head, divergent from the base to middle and thence gradually incurved to the tip, each armed with two or three strong teeth on the inner side between the middle and the tip; in small males they are similar in size and form to those of the females. Antennæ 12-jointed, with the joints from the fifth to the eleventh produced each into a strong dentiform process at the apex. Pronotum unevenly convex, sparsely punctured and glossy in the middle, closely punctured and more or less pubescent near the sides; front and hind margins fringed with tawny hairs. Elytra for the most part coriaceous and dull, but sparsely punctured and glossy near the base; each with a very closely punctured basal spot. Breast pubescent.

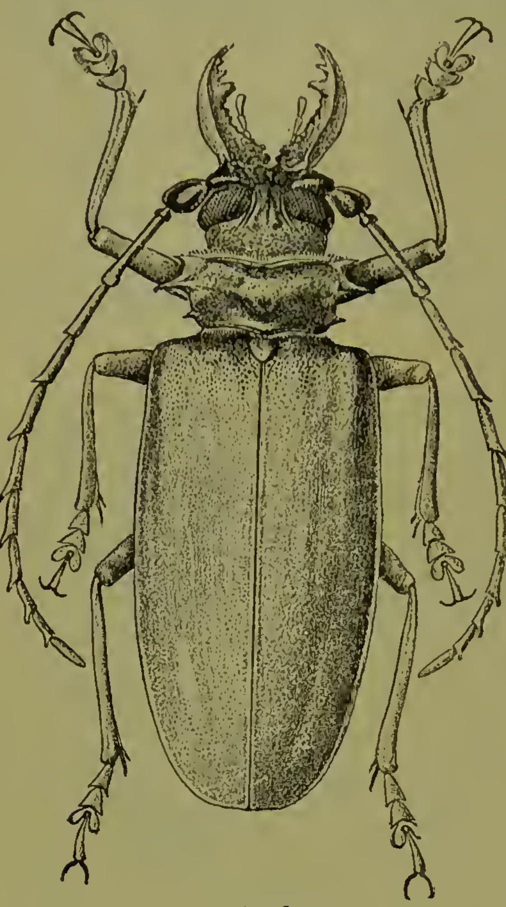


Fig. 9.
Acanthophorus serraticornis, Oliv., ♂.

♀. Mandibles not so long, straight from the base to the middle or thereabouts, incurved at the end, armed with several teeth along the inner edge. Antennæ shorter; last ventral segment longer and rounded at the apex.

Length 53–92; *breadth* 17–28 mm.

Hab. Madras; Mysore; Trivandrum.

21. **Acanthophorus rugiceps**, *Gahan, A. M. N. H.* (6) xiv, p. 223 (1894).

♂. Brownish-black in colour. Head large, strongly rugose except along the middle; eyes widely separated above, the space between them more than half of the whole width of the head and not impressed with a distinct median groove; the supra-orbital ridges prominent, continued back a short distance beyond the eyes; mandibles long and curved, armed each with three or four teeth on the inner side between the middle and tip.

Antennæ 11-jointed, with a rather short dentiform process at the apex of each of the joints from the sixth to the tenth. Pronotum densely punctured, except in the middle, rugose towards the sides. Elytra nitid, slightly rugulose, somewhat coriaceous in appearance, very feebly and sparsely punctured, but with a closely punctured spot on each near the base. (Female unknown.)

Length 60 ; *breadth* 20 mm.

Hab. Bombay (?).

22. **Acanthophorus modicus,** *Gahan, A. M. N. H.* (6) xiv, p. 222 (1894).

♂. Brownish-black in colour. Head of moderate size, nitid, almost impunctate in front and upwards along the middle; somewhat rugosely punctured in a slightly depressed area behind each eye; the supra-orbital ridges feebly raised and not continued back beyond the hind margin of the eyes; the interocular space rather less than half of the whole width of the head, impressed with a distinct median groove which is continued downwards to the clypeus. Mandibles porrect from the base to the middle, incurved towards the end, armed with several teeth on the inner edge. Antennæ with the joints from the sixth to the tenth rather feebly toothed at the apex. Pronotum nitid, scarcely punctured in the middle, densely and somewhat rugosely punctured towards the sides, with two widely separated, slightly raised swellings on the disk. Elytra nitid, feebly and sparsely punctured. Breast pubescent. (Female unknown.)

Length 45 ; *breadth* 15 mm.

Hab. Lahore in the Punjab.

Group *CANTHAROCNEMINI.*

Eyes feebly emarginate or almost entire. Antennæ short, sometimes (genus *Cantharocnemis*) extending but little or not at all beyond the base of the prothorax. Lateral margins of prothorax distinct, with a projecting angle or tooth between the middle and the base. Tibiæ rather strongly dilated at the end, with the outer angle prominent or dentiform; the outer edges dentate; the terminal spurs broad and flat. Wing-venation of the usual Prionine type.

There is a difference of opinion in regard to the affinities of this group. Lacordaire, attaching undue importance to the unusual form of the tibiæ, placed it among his groups of aberrant *Prionides* and not in the normal series. Lameere, on the other hand, associates the *Cantharocnemini* with the *Spondylini*, considering the affinities between the two to be very close. With this view I am unable to agree. In the *Spondylini* the prothorax is not marginate at the sides, and the wing-venation is that of the less specialised *Cerambycinæ* and most *Lepturinæ*. The *Spondylini*

are undoubtedly, as M. Lameere maintains, a primitive group, but have not, in my opinion, any direct or close relationship with the *Cantharocnemini.* The latter I consider to be somewhat secondarily modified forms of true *Prioninæ*, and as such I place them here. The group is almost entirely confined to the African region, the only species known to occur outside Africa being a very rare one found near Bombay and also in Ceylon.

Genus **CANTHAROCNEMIS.**

Cantharocnemis, *Serville, Ann. Soc. Ent. Fr.* i, p. 132 (1832) : *Lacord. Gen. Coléopt.* viii, p. 32 (1869).

Type, *C. spondyloides*, Serv., an African species.

Range. Bombay, Ceylon and Africa.

In form rather short and robust. Head broad, with the front very short and obliquely sloped, the clypeus transversely depressed, the eyes transverse, scarcely emarginate in front; mandibles strong, sometimes falciform and emarginate at the apex in the male. Antennæ robust, variable in length, but generally much shorter than the body in both sexes, 11-jointed; first joint thick, rather short, slightly curved, thickened towards the end; joints third to tenth subequal, angulate at the apex, eleventh longer than the tenth. Prothorax transverse, its lateral edges project in an angle at a greater or less distance from the base and converge thence more or less gradually towards the apex. Elytra rather short, convex, rounded at the apex, broader in front than the base of the prothorax. Legs stout, somewhat compressed; femora a little broader in the middle; tibiæ enlarged at the distal end, with very prominent dentiform outer angle, especially in the anterior two pairs, the external margin of each armed with a variable number of teeth; tarsi moderately long, with the first joint rather narrow, glabrous underneath at the base and along the middle, third bilobed but with the lobes very short in some of the species. Intercoxal part of prosternum strongly arched in front, sloped posteriorly with its end resting in a depression of the mesosternum; mesosternal process narrow.

This genus of *Prioninæ* may be readily distinguished from all others occurring in the Indian region by the exceptional form of the tibiæ, which, with their prominent dentiform outer angle and toothed external border, somewhat resemble those of the *Lucanidæ.* Apart, however, from this character and the tendency to a great abbreviation of the antennæ, the genus conforms with the normal Prionid type and there appears to be no good reason for regarding it as a particularly aberrant member of the family.

23. **Cantharocnemis downesi**, *Pasc. Trans. Ent. Soc.* (2) iv, p. 236 (1858).

Reddish brown, varying to a somewhat darker tint. Head sparingly punctured on the vertex, closely and rugosely on the

clypeus, sides and the lower part of the antennal supports; vertex marked with an impressed line which widens out into a channel in front between the eyes and antennal supports; clypeus limited above by two oblique or somewhat arcuate lines that converge towards the channel between the depressed transversely directed antennal supports; mandibles of male falciform, with tooth at base and an emargination forming two teeth at the apex, the upper border carinate, those of the female very much shorter, straight or but slightly diverging from the base and incurved towards the tip, the inner edge of each with one or two feeble teeth. Antennæ of ♀ scarcely reach beyond the base of the prothorax; those of the ♂ are longer and stronger; joints third to tenth angulated in front at the apex, more acutely so in the ♂ than in the ♀, rather sparingly punctured behind, closely and rugosely punctured in front. Prothorax transverse, the lateral edges projecting in an angle at about one-third of their length from the base; disk convex with a slight depression in the middle, sparingly punctured and glossy over the whole of the middle area, closely rugose-punctate towards the sides. Elytra much less than twice as long as their width across the base, obtusely rounded at the apex, irregularly rugose and punctate in the ♀, smoother and less punctate in the ♂, each with two feebly-raised dorsal lines. Tibiæ of the anterior two pairs rather sparingly punctured in front, closely behind, those of the hind pair densely and coarsely punctured on both sides; third joint of tarsi completely bilobed. Hind breast sparsely clothed with longish tawny hairs; abdomen finely and rather closely punctate; last ventral segment of ♀ rounded behind and fringed with tawny setæ.

Fig. 10.
Cantharocnemis downesi, Pasc., ♂.

Length ♂ 38, ♀ 25; *breadth* ♂ 16, ♀ 11 mm.

Hab. Bombay (♂ type) and Ceylon (♀).

Group *EURYPODINI.*

Eyes emarginate. Ligula entire. First antennal joint short, the third long. Lateral margins of prothorax entire, or sometimes (*Neoprion*) with an angle or tooth near the middle. Intercoxal process of the prosternum in the form of a rather thin horizontal plate. Legs smooth. A sexual difference in the puncturation of the prothorax as well as in the length of the antennæ and mandibles.

This group, which, under another name, is Lacordaire's group *Zaracides*, includes only two genera—*Eurypoda* and *Neoprion*; the latter is regarded by M. Lameere as merely a subgenus. One species only occurs within our faunistic area, the others are found in China, Japan, Malay Peninsula, Sumatra and Borneo. The group has no close relationship with any of the other groups included in our fauna.

Genus **NEOPRION**.

Neoprion, *Lacord. Gen. Coléopt.* viii, p. 131 (1869).
Eurypoda (*Saund.*) *subgen.* Neoprion (*Lac.*), *Lameere, Ann. Soc. Ent. Belg.* xlviii, p. 9 (1904).

Type, *N. parandræformis*, Lacord.

Range. Andaman Is. and Malay Peninsula.

Dorso-ventrally compressed. Head with the clypeus thickened at its lower margin, triangularly depressed behind, limited above by two oblique lines, from the junction of which a rather deep impressed line or groove passes backwards on to the vertex; mandibles shorter than the head, stout, nearly horizontal, incurved and sharply pointed at the apex, carinate above, armed with a tooth on inner edge; eyes emarginate; antennal supports flattened, on a level with the thickened front border of the clypeus. Antennæ reach to a little beyond the middle of the elytra in the ♂, not so far as to the middle in the ♀; first joint stout and very short; third more than three times as long as the first, and a little longer than the fourth and fifth united; fourth to eleventh subequal in length, each with two narrow elongate poriferous fossæ on the anterior side, similar but much shorter fossæ being present near the apex of the third. Pronotum of the ♂ as broad as the elytra, with its sides nearly parallel from the slightly projecting front angles up to the lateral angles placed a little behind the middle, thence converging obliquely to the base; the front margin somewhat bowed backwards in the middle; the base rounded in the middle, sinuate towards the sides; disk feebly convex, with a large, sparsely punctate, smooth area, roughly octagonal in shape, over the whole of the central part, the spaces between this and the lateral edges are very finely and closely punctate and opaque; pronotum of ♀ with its sides somewhat convergent in front from the prominent lateral angles, strongly punctured near the sides. Elytra somewhat flattened above, broadly rounded at the apex, the sides narrow, nearly vertical, with an obtuse costa running between each and the disk. Episterna of metathorax nearly parallel-sided, narrowed a little near the apex, which is straightly truncate. Legs rather short; femora flattened fusiform; the hind pair extended but little beyond the second abdominal segment; tarsi relatively short, with the first joint scarcely longer than the second.

24. **Neoprion parandræformis**, *Lacord. Gen. Coléopt.* viii, p. 132 (1869); *Lameere* (Eurypoda), *Ann. Soc. Ent. Belg.* xlviii, p. 10 (1904).

Chestnut-red in colour, with the upper surface, except towards the sides of the pronotum, very glossy; antennæ blackish, sparsely and rather finely punctate. Head sparsely punctured, the punctures becoming closer and rougher behind the eyes. Prosternum, the sides of the pronotum and the episterna of the mesothorax very finely and closely punctured in the ♂; the sides of the pronotum in the ♀ strongly punctured and slightly opaque; the prosternum nearly smooth. Elytra more or less thickly and distinctly punctured, each with a rather broad but shallow longitudinal depression on the posterior half, close to the lateral costa. Femora smooth, tibiæ slightly punctate.

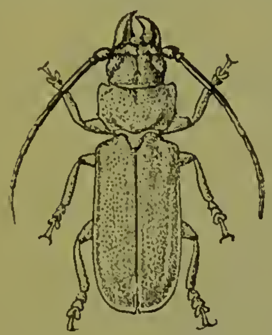


Fig. 11.—*Neoprion parandræformis*, Lacord., ♂.

Length 24–34 mm.

Hab. Andaman Islands; Malacca.

Group *MACROTOMINI*.

Eyes entire, or but feebly sinuate in front. Ligula entire. Prothorax crenulate, denticulate, or spinulose along each side. First antennal joint long, or moderately long, never very short. Intercoxal process of prosternum more or less flat and horizontal. Legs more or less spiny. A sexual difference in the puncturation of the thorax generally present and often very strongly marked.

In this group I include two of Lacordaire's groups—the *Remphanides* and *Macrotomides*; the first is distinguished as follows:—The third antennal joint not longer than the first, the prothoracic lateral margins distant from the prosternal sutures and the epipleures of the elytra strongly widened out near the base; in the true *Macrotomides* the third antennal joint is always longer, generally very much longer, than the first, the prothoracic margins are not very distant from the prosternal sutures and the elytral epipleures are little widened near the base.

Synopsis of Genera.

A. Third antennal joint not longer than the first.
  a. First joint of front tarsus scarcely longer than the second .... RHAPHIPODUS, p. 30.
  b. First joint of front tarsus much longer than the second .... REMPHAN, p. 33.

B. Third antennal joint much longer than the first.
a. Hind angles of prothorax not directed backwards .... MACROTOMA, p. 35.
b. Hind angles of prothorax directed backwards .... ZOOBLAX, p. 38.

Genus RHAPHIPODUS.

Rhaphipodus, *Serville, Ann. Soc. Ent. Fr.* i, p. 168 (1832); *Lacord. Gen. Coléopt.* viii, p. 106 (1869).

Type, *R. suturalis*, Serv., a species from Java.

Range. India and Ceylon, Andamans, Java, Sumatra, Borneo and Philippine Islands.

♂. Head not broader than long, impressed with a median groove; clypeus slightly depressed, flat, emarginate in front, bounded behind by two oblique or slightly curved grooves that diverge from the end of the median groove; eyes rather large, very slightly emarginate in front; mandibles vertical, stout, relatively short, convex in front, each armed with one or two strong teeth on the inner side. Antennæ shorter than the body, 11-jointed; first joint longer and much thicker than the third; third longer and thicker than the fourth; fourth to tenth subequal in length. Pronotum transverse, somewhat unevenly convex, denticulate or spinose along each side; the upper surface for the most part very closely punctulate and dull, but with two or more sparsely punctulate, nitid or subnitid spaces near the middle and a narrow tranverse strip of the same kind near the base. Scutellum very closely punctulate. Elytra twice as long as broad or longer, rounded or subtruncate at the apex. Body beneath very closely punctulate, more or less dull, but with a median triangular area of the metasternum, and the hind borders of the first four abdominal segments nitid, sparsely or not at all punctulate. Intercoxale of the prosternum horizontal behind, obtusely pointed at the apex. Last ventral segment truncate or slightly sinuate at the apex. Legs long and rather thick; femora parallel-sided, denticulate or spinose along their ventral edges; tibiæ compressed, more or less spinose along the edges; tarsi broad, with the first joint of the front tarsus scarcely longer than the second, that of the hind tarsus not so long as the second and third united.

♀. Antennæ shorter; pronotum with its sides converging more in front, and more strongly denticulate or spinose, its disk sparsely punctulate and more or less shiny all over, not exhibiting definite smooth spaces; body beneath less closely punctulate and more glossy than in the male.

25. **Rhaphipodus taprobanicus**, *Gahan, A. M. N. H.* (6) v, p. 49 (1890); *Lameere, Mém. Soc. Ent. Belg.* xi, p. 73 (1903).

♂. Head, pronotum, antennæ and legs dark brown. Elytra and underside reddish brown in colour. Antennæ reach to the

apical third or fourth of the elytra; first joint about one-fourth longer than the third, subasperate in front, punctured above; third joint about one-third longer than the fourth, sparsely punctured and nitid above; fifth to ninth striated to a greater or less extent in front, partly also above; the last two joints longitudinally striated and dull all over. Pronotum with two large

Fig. 12.—*Rhaphipodus taprobanicus*, Gahan, ♂.

sparsely punctured shiny spaces near the middle, a smaller, subnitid, strongly punctured spot external to each of these and a sparsely punctured, narrow, transverse band near the base; its sides denticulate, for the most part sub-parallel, but rounded off towards the front margin, projecting and strongly toothed near the base. Elytra shiny at the base and for some distance back alongside of the suture, the rest of their surface very minutely granulate and more or less dull. Femora and tibiæ of

the fore legs asperate, especially in front, the tarsi dilated, with the first three joints densely fringed with tawny hairs at each side.

♀. Antennæ not extended to the middle of the elytra. Pronotum finely and sparsely punctulate and shiny in the middle, strongly and thickly punctured towards the sides; its lateral edges more strongly toothed than in the male.

Length 48–60 mm.

Hab. Ceylon.

26. **Rhaphipodus subopacus,** *Gahan, A. M. N. H.* (6) v, p. 48 (1890); *Lameere, Mém. Soc. Ent. Belg.* xi, p. 73 (1903).

♂. Head, prothorax and legs nearly black; elytra and body beneath dark brown, tarsi reddish brown. Antennæ reach a little beyond the middle of the elytra; first joint stout, dorso-ventrally compressed and somewhat concave underneath, strongly punctured, more densely so towards the front edge, as long as the second, third, and fourth joints united; third a little thicker and longer than the fourth. Pronotum with two very sparsely punctate shiny spaces near the middle, a small nitid spot external to each of these and a narrow, transverse, nitid band close to the basal margin; its sides nearly parallel for two-thirds of their length, thence converge strongly to the base, each armed with a series of small spines, the longest of which, slightly recurved, is placed where the pronotum begins to contract towards the base, this is followed behind by two or three very short spines. Elytra sparsely punctured and glossy at the base, especially near the scutellum and for a short distance along the suture, the rest of the surface very finely and closely granulate and dull. First joint of front tarsus slightly longer than the second joint; first joint of hind tarsus a little shorter than the next two united. Last abdominal segment truncate at the apex.

♀. Antennæ not extended beyond the middle of the elytra. Pronotum sparsely punctured, somewhat glossy in the middle, more thickly punctured and opaque towards the sides, marked with a feeble median impression and with two large, feebly raised swellings on the disk which are more sparsely punctured than the surrounding parts. Last abdominal segment rounded at the apex.

Length 37–55; *breadth* 14–20 mm.

Hab. Nilgiri and Anaimalai Hills.

In my original description of this species the type described was erroneously stated to be a female. It is, however, a small male.

27. **Rhaphipodus gahani,** *Lameere, Mém. Soc. Ent. Belg.* xi, p. 72 (1903).

♂. Head, pronotum, body beneath, and legs black; elytra dark chestnut-brown, glossy. Antennæ extended to about the

middle of the elytra; first joint sparsely punctured, almost as long as the next three joints united, the third thicker but very little longer than the fourth. Pronotum widest at about one-third of its length from the base, thence narrowed gradually in front and more strongly behind; its edges armed with a series of small spines, one of which at the lateral angle is recurved; upper surface with four ill-defined, sparsely punctured, shiny spaces across the middle and a narrow transverse one near the base, the last turned obliquely forwards at each end. Elytra glossy over almost the whole surface. Tarsi long and narrow; first joint of hind tarsus longer than the other joints united. (Female not known.)

Length 47–50; *breadth* $15\frac{1}{2}$ mm.

Hab. Northern India (*coll. A. Fry*); Darjeeling (type in Hamburg Museum).

The above description is based upon an example from the late Mr. Fry's collection. The type specimen is described by M. Lameere as entirely of a pitch-black colour.

28. **Rhaphipodus andamanicus**, *Gahan, A. M. N. H.* (6) xiv, p. 224 (1894).

♂. Reddish brown in colour, with the head, antennæ and legs more or less dark brown. Antennæ reach to the beginning of the posterior fourth of the elytra or a little beyond; third joint longer than the first and a little longer than the fourth and fifth united. Pronotum with a series of rather strong spines on each side; its sides distinctly converge in front, each forms with the front margin a somewhat acute and slightly projecting angle; upper surface with two large triangular spaces near the middle, a small space external to each of these and a narrow transverse band near the base, sparsely punctured and more or less shiny. Elytra somewhat smooth and glossy around the scutellum and for some distance along the suture, very minutely granulated, only slightly glossy over the rest of their surface.

♀. Pronotum with two slight swellings on each side of the middle; sparsely punctured and subnitid over the whole central area, more thickly punctured and less nitid towards the sides. Antennæ reaching to the middle of the elytra.

Length 49–67 mm.

Hab. Andaman Islands.

Genus **REMPHAN.**

Remphan, *Waterhouse, Trans. Ent. Soc.* i, p. 67 (1836); *Lacord. Gen. Coléopt.* viii, p. 107 (1869).

Type, *R. hopei*, Waterh.

Range. That of the type species.

Closely allied to *Rhaphipodus*, Serv., but differs from that genus by the following characters:—First and third joints of

the antennæ with a few short spines behind; first joint equal in length to the third. Front angles of the pronotum project forward rather strongly. First joint of front tarsus as long as the second and third united.

29. **Remphan hopei**, *Waterh. Trans. Ent. Soc.* i, p. 67, pl. 8, fig. 1 (1836).
Macrotoma alteni, *Nonfr. Berl. ent. Zeit.* xxxvi, p. 376 (1891).

Extremely variable in regard to size, and varies in colour from reddish brown to dark brown, but with the elytra always of a much lighter tint—either reddish brown or tan-coloured.

♂. Head very finely granulate and opaque, impressed with a median groove that extends from the clypeus upwards between the antennal tubers and the eyes, and thence is continued along the vertex as a very fine linear groove or carina. Prothorax with its sides slightly converging in front up to the base of the anterior projections, furnished each with a series of short spines; notum very closely punctulate and opaque, but marked with certain well-defined shining areas which are slightly raised and sparsely punctate; two of these near the middle are triangular in form and conjoined at their inner angles, a third, narrow and transverse, placed just in front of the base and two much smaller areas near each side, the inner one irregular in form, the outer forming a narrow oblique ridge; a median polished line runs from the basal band up to the junction of the two triangular areas and for a short distance beyond. Scutellum closely punctulate and opaque. Elytra about twice as long as their conjoint width; these present a finely granular and dull appearance except around the base and for a short distance backwards along the suture. Body very finely and closely punctulate beneath, except on a median triangular area of the metasternum, on a transverse strip at the hind border of each of the first four abdominal segments and on the middle of the fifth segment, these parts being glossy. Femora and tibiæ spinulose along their dorsal and ventral faces, the front femora asperate or rugulose on their front and hind faces. Last ventral segment with rounded hind border fringed with tawny hairs.

♀. Antennæ not reaching beyond the middle of the elytra. Prothorax with its sides somewhat more strongly convergent in front and more strongly spined; notum more irregularly and much less closely punctulate, the punctures coarser towards the sides and the slightly raised shining spaces, corresponding with those of the male, ill-defined. Body beneath less closely and evenly punctulate, the glossy area of the metasternum less well-defined; abdomen more or less glossy except near the sides; last ventral segment with a sinuate notch in the middle of hind margin. Legs shorter and more slender; front femora spinulose as in the male, but not asperate.

Length 40–96; *breadth* 12–30 mm.

Hab. India (?); Andaman Islands; Pegu; Mergui Archipelago; Siam; Penang; Singapore; and Borneo.

Genus MACROTOMA.

Macrotoma, *Serville, Ann. Soc. Ent. Fr.* i, p. 137 (1832); *Lacord. Gen. Coléopt.* viii, p. 97 (1869).
Prinobius, *Mulsant, Ann. Soc. d'Agric. Lyon*, v, p. 207 (1842).

Type, *M. serripes* (Fab.), Serv., a West-African species.

Range. African and Oriental Regions, and Mediterranean Sub-region.

♂. Head somewhat elongated behind the eyes; clypeus depressed, limited above by an arcuate impression; antenniferous tubers not distant from each other, the narrow concave space between them impressed with a median groove; eyes not deeply emarginate in front; mandibles vertical or oblique, straight at base, incurved at tip, each with one or two teeth on inner edge. Antennæ either longer or shorter than the body, usually asperate or denticulate near the base, 11-jointed; first joint stout, somewhat compressed, third elongated and thickened, at least as long as the two succeeding joints united. Pronotum rather strongly deflexed at the sides, especially just before the middle, with its lateral edges brought close to the outer angles of the acetabula and to the prosternal sutures. Each edge armed with a series of short spines or teeth. Elytra much more than twice as long as their width across the base, rounded at the apex, usually dentate at the suture. Legs rather long, more or less spinose beneath; tarsi long, with the first joint narrow and much longer than the second. Intercoxal process of prosternum not strongly raised, flattened and horizontal behind.

♀. Antennæ shorter, with the first and third joints much less thickened and not asperate; lateral edges of prothorax more strongly spined and more convergent in front; legs shorter, less asperate and spinose, the first joint of the tarsi relatively shorter.

In the species of our second section that correspond to the genus *Prinobius* of Mulsant, the male differs further from the female by the nature of the puncturation of the pronotum, prosternum, mesosternum and the sides of the metasternum.

I. *No marked sexual difference in the puncturation of the prothorax, mesosternum and metasternum.*

30. **Macrotoma fisheri**, *C. O. Waterh. A. M. N. H.* (5) xiv, p. 382 (1884).

♂. Reddish brown, with the head, basal three joints of the antennæ and the front legs nearly black, the middle and hind legs and all the tarsi piceous, the elytra yellowish brown but of a darker colour at the base; hind breast clothed with fulvous-yellow pubescence. Head opaque, strongly and closely punctured

in front, densely and finely granulose behind, the rather deep channel between the antenniferous tubercles sparsely punctured. Antennæ reach to the apical third of the elytra; first joint rather stout, twice as long as broad, strongly but sparsely punctured, third thick, flattened or slightly channelled above, equal in length to the fourth, fifth, and half of the sixth; sparsely punctured, somewhat asperate beneath. Prothorax with its lateral edges sharply spined, converging in nearly straight lines towards the apex; the notum rather strongly deflexed at the sides, flattened in the middle and marked with a few shallow depressions, a small median space smooth and glossy, the rest of the surface coarsely punctured, more densely so towards the sides. Scutellum dull, sparsely punctured. Elytra parallel-sided, scarcely wider than the base of the prothorax, finely granulate at the shoulders and near the scutellum, rugulose over the rest of their surface. Legs somewhat spinous beneath, the middle and hind femora slightly asperate above, the front femora very rough; first joint of tarsi not so long as the next two united. Prosternal process coarsely and not very closely punctured; mesosternum pubescent, deeply impressed on each side; metasternum finely punctured, somewhat more thickly so at the sides than in the middle. Abdomen slightly glossy, finely but not very closely punctured.

Length 55–70 mm.

Hab. Burma.

II. *Prothorax above and below, mesosternum and sides of metasternum in the male very closely punctured and dull, but with a transverse band at the base of the pronotum and certain rather well-defined areas on the disc sparsely punctured and glossy* (Prinobius).

A. *First joint of antennæ one-third longer than its width.*

31. **Macrotoma crenata,** *Fabr.* (Prionus) *Syst. Eleuth.* ii, p. 264 (1801); *C. O. Waterh.* (Macrotoma) *A. M. N. H.* (5) xiv, p. 382.
Macrotoma inscripta, *C. O. Waterh. l. c.* p. 380.

♂. Dark brown, with the elytra of a somewhat lighter brown tint that becomes darker towards the base; the intermediate joints of the antennæ, the hind legs and the tarsi more or less reddish. Head somewhat strongly punctured in front and between the eyes, finely granulose behind. Antennæ reach to the apical third or fourth of the elytra: first joint relatively short, only about one-third longer than broad, coarsely punctured; third thickened, slightly channelled and sparsely punctured above, somewhat denticulate below, equal in length to the fourth, fifth, and nearly half of the sixth united. Prothorax with its sides converging in slightly curved lines in front; the disc with two triangular, strongly punctured and slightly depressed, nitid areas in front, two small rugose spots external to these and a transverse nitid

band at the base, this basal band produced obliquely at its extremities; at the middle it is produced forwards in a narrow triangle which sometimes extends to and unites with the inner angles of the triangular spaces in front. Elytra densely granulose, the granules stronger and the surface rougher towards the base, especially near the suture. Metasternum bare of pubescence, with a sparsely punctured triangular area clearly marked off by a slightly raised line from the closely punctured part on each side. Front legs asperate, spinose beneath, the femora thickened, the tibiæ elongated and slightly curved; the middle and hind legs much less spinose; first joint of the tarsi scarcely so long as the next two joints united.

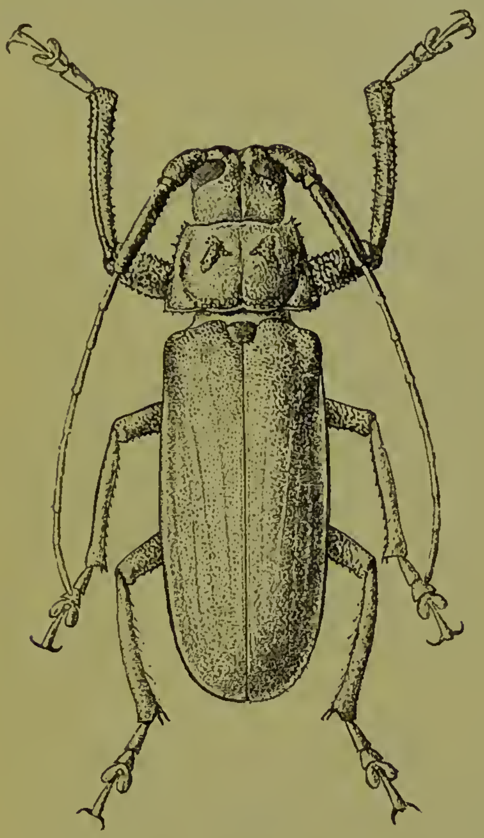


Fig. 13.—*Macrotoma crenata*, Fab., ♂.

♀. Antennæ shorter, not reaching beyond the middle of the elytra, with the first and third joints much less thickened than in the male, third not asperate. Prothorax with its edges more strongly spined, and more convergent in front; the notum strongly and rather closely punctured towards the sides, less closely in the middle and there also more or less glossy. Metaternum pubescent at the sides as well as in the middle, rather closely granulate-punctate. Front legs similar to the other two pairs.

Length 37–52 mm.

Hab. India—Kashmir to South Bombay and Nepal to Calcutta; Ceylon; Burma.

32. **Macrotoma plagiata**, *C. O. Waterh. A. M. N. H.* (5) xiv, p. 381 (1884).

Macrotoma plagiata, *Lameere, Mém. Soc. Ent. Belg.* xi, p. 167 (1903).

Greatly resembles *M. crenatus* (Fab.) and agrees with it in most points of structure, especially in the proportions of the first joint of the antennæ and front tarsus, but it is distinguishable from that species: (1) by the greater relative length of the third joint of the antennæ, as this joint in the male is quite as long as the fourth, fifth, and sixth united; (2) by the smaller size of the

shining spaces on the male pronotum, the two anterior of which are somewhat ovate in shape and slightly elevated (except at the inner edge) instead of being depressed ; (3) by its darker colour that is almost black with the elytra dark brown.

Length 38–45 mm.

Hab. Northern India.

B. *First joint of antennæ twice as long as its width.*

33. **Macrotoma spinosa**, *Fab.* (Prionus) *Mant. Ins.* i, p. 130 (1787); *Lameere, Mém. Soc. Ent. Belg.* xi, p. 165 (1903).
Macrotoma ellioti, *C. O. Waterh. A. M. N. H.* (5) xiv, p. 379 (1884).
Macrotoma difformis, *Nonfr. Berl. ent. Zeit.* xxxvi, p. 377 (1891).

♂. Dark brown in colour; the elytra rusty brown towards the base and somewhat yellowish towards the apex; the antennæ at the apex, the hind legs and all the tarsi somewhat reddish. Head coarsely punctured between the eyes, closely and finely granulate behind. Antennæ reach to the apical third of the elytra; first joint twice as long as it is broad, closely and coarsely punctured; third more than twice as long as the first and equal in length to the fourth, fifth and two-thirds of the sixth united, spinose beneath and along the front margin, the spines rather short. Pronotum about one-fifth broader at the base than at the apex, very closely and finely punctate and opaque, but with two triangular spaces before the middle, a small rugose spot external to each of these, a narrow transverse band near the base, a median streak from the middle and an oblique rugose band from each end of the basal band, all more or less strongly nitid. Elytra rugulose-punctate and very finely granulose, the granules become more distinct and the surface rougher towards the base, especially on the slightly elevated part near the scutellum. Front femora and tibiæ asperate, beset with short sharp spines beneath; middle and hind femora sparsely punctulate, armed with a few spines beneath. First joint of the front tarsus longer than the second and third united.

Length 45–65 mm.

Hab. India: Barway in Bengal; Nilgiri Hills, Bangalore; Muscat in Arabia.

Genus ZOOBLAX.

Zooblax, *Thomson, Rev. et Mag. de Zool.* 1877, p. 274.

Type, *Z. elateroides*, Thoms.

Range. Andaman and Nicobar Islands and Nilgiri Hills.

♂. Head as in *Macrotoma*, but the eyes larger and more closely approximated above. Antennæ as long as the body, 11-jointed; third joint thickened, asperate, more than twice as long as the first, canaliculate above and below. Pronotum with denticulate lateral edges that converge gradually from base to apex; its

hind angles acute and directed slightly backwards, somewhat in the manner characteristic of the *Elateridæ*; its upper surface finely and very closely punctured and opaque, but with two rather small, coarsely punctured, glossy depressions in front of the middle and a short band of a similar kind running obliquely forwards from the base on each side. Prosternum, mesosternum and sides of the metasternum very closely punctulate; a very sharply limited, rather strongly depressed median triangular area of the metasternum, sparsely punctulate and glossy. Last ventral segment sinuate or subtruncate at the apex. Other characters almost as in *Macrotoma*, but with the front legs, especially the tibiæ, more elongated.

♀. Antennæ shorter and more slender, with the third joint scarcely asperate. Pronotum coarsely punctured except in the middle; its hind angles project rather strongly outwards, but not backwards. Sterna less closely punctured; metasternum without a definite space in the middle.

This genus is not recognized by M. Lameere, who regards the two species here included in it as forming a small group in the genus *Macrotoma*, with characters that differ only in degree from those met with in the species of our second section of that genus.

34. **Zooblax æneipennis**, *C. O. Waterh.* (Macrotoma) *Trans. Ent. Soc.* 1881, p. 428; *Gahan* (Prinobius), *A. M. N. H.* (6) v, p. 50 (1890); *Lameere* (Macrotoma), *Mém. Soc. Ent. Belg.* xi, p. 170 (1903).

Black, the elytra of a fine rather dark green colour.

♂. Head sparsely and rather strongly punctured in front, granulate behind the eyes; the antennal supports separated by a deep channel grooved at the bottom. Antennæ a little longer than the body; first joint rather short, strongly punctate; third thickened, broadly canaliculate above and below, spinulose at the lower front margin, nearly three times as long as the first and slightly longer than the fourth and fifth united. Prothorax with the sides feebly denticulate, converging in nearly straight lines from base to apex; disc strongly raised in the middle, with two small, somewhat glossy depressions anteriorly and a longitudinal median one near the base; the rest of the surface finely and very closely punctate and opaque. Elytra nitid, closely rugulose-punctate, somewhat raised and covered with small tubercles or granules near the scutellum, spined behind at the sutural angle. Legs long; first joint of the front tarsus narrow and elongate, much longer than the second and third united.

♀. Antennæ smooth, sparsely punctured, not reaching beyond the middle of the elytra. Pronotum nitid, sparsely and feebly punctured in the middle, strongly and more closely towards the sides; spinose along the side margins, with a stronger, recurved spine at the hind angles; the sides not so straight as

in the male; the disc with three shallow depressions. Legs less scabrous than those of the male. Prosternum nitid, very sparsely punctate; hind breast sparsely pubescent and feebly punctured at the sides.

Length 33–60 mm.

Hab. Nilgiri Hills.

35. **Zooblax elateroides**, *Thoms. Rev. et Mag. de Zool.* 1877, p. 274; *Lameere* (Macrotoma), *Mém. Soc. Ent. Belg.* xi, p. 171 (1903).

♂. Almost entirely of a dull reddish-brown colour, the head, prothorax and base of the antennæ somewhat darker than the rest. Mandibles rugosely punctured, except near the tip; head rather strongly punctured in front and on the vertex, closely and finely granulate behind, impressed above with a fine median groove. Antennæ with the first joint coarsely punctured, somewhat flattened above, canaliculate below; third much broader and thicker than any of the following joints, nearly as long as the fourth, fifth, and sixth united. Pronotum very uneven in the middle, the anterior two shiny depressions having two swellings in front of them and two larger ones behind; a median impressed line extends from the base to a point in line with the anterior depressions. Elytra finely granulated; each with three or four feebly raised lines, the interspace between the suture and the innermost line somewhat raised from the base to the middle and more coarsely granulated than the rest of the surface.

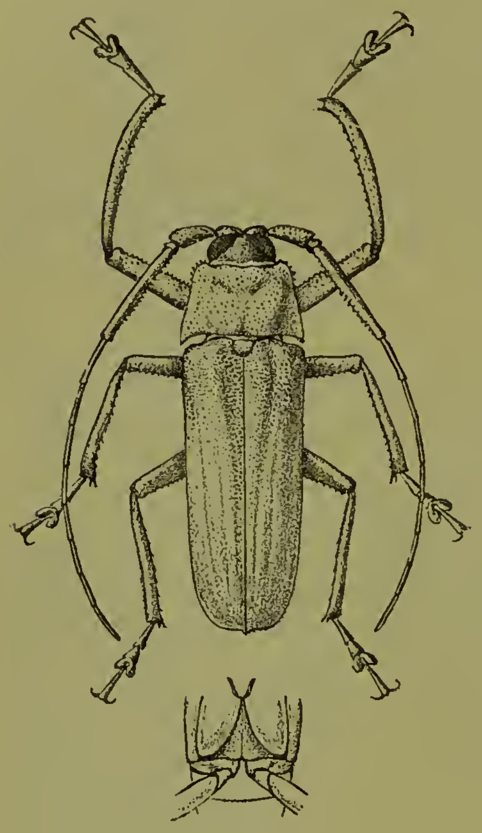


Fig. 14.
Zooblax elateroides, Thoms., ♂, and metasternum of the same.

Legs long; the femora of the front pair asperate in front, somewhat transversely wrinkled behind, denticulate beneath; tibiæ of the same pair very long, slightly curved, asperate in front and behind, denticulate beneath; middle and hind legs sparsely punctulate, with the lower margins asperate or denticulate; first joint of all the tarsi narrow and as long as the second and third united. Hind breast slightly pubescent at the sides and in the glossy space in the middle.

♀. Antennæ and legs shorter and more slender than in the male and scarcely asperate. Pronotum closely and very coarsely punctured, dull at the sides, less closely punctured, in part impunctate, in the middle and glossy. Hind breast entirely covered with a faint tawny pubescence.

Length 30–50 mm.

Hab. Andaman and Nicobar Islands.

Group *ÆGOSOMINI.*

Head with the front and clypeus oblique and transversely broadly concave; the clypeo-frontal sutures generally well marked; the clypeus finely marginate at the sides; the labrum distinct, generally large, united by a straight or slightly arcuate suture with the coriaceous front edge of the clypeus. Eyes strongly emarginate; the lower lobes frequently large, but never extend so to reach the front. Antennæ inserted near the base of the mandibles; the third joint generally very long. Lateral margins of prothorax curve downwards from the base and are more or less closely approximated to the outer angles of the coxal cavities and to the prosternal sutures, sometimes obsolete in front. Intercoxal process of prosternum arched. Epimera of prothorax short, those of the metathorax obliquely truncate, scarcely prolonged behind. Epipleures of elytra exceptionally only (genus *Dandamis*) widened out below the shoulders. Third tarsal joint cleft almost to the base, but with the lobes sometimes narrow and exceptionally very short.

Synopsis of Genera.

A. First antennal joint longer and spined at apex. Baralipton, p. 42.
B. First antennal joint shorter and not spined.
  a. Last joint of tarsi twice as long as the first three united, and the lobes of 3rd very short .... Dinoprionus, p. 43.
  b. Last joint of tarsi shorter or very little longer than the first three united.
    a'. Epipleures of elytra not widened out near the base.
      a². First joint of hind tarsi not longer than the 2nd and 3rd united .... Ægosoma, p. 44.
      b². First joint of hind tarsi longer than the 2nd and 3rd united................ Sarmydus, p. 51.
    b'. Epipleures of elytra widened out under the shoulders .... Dandamis, p. 50.

Genus BARALIPTON.

Baralipton, *Thoms. Archiv. Ent.* i, p. 341 (1857); *Lacord. Gen. Coléopt.* viii, p. 153 (1869).

Type, *B. maculosum*, Thoms.

Range. Northern India.

♂. Head elongated behind the eyes, much narrower than the prothorax: mandibles short and oblique, with sharp toothless inner edge; eyes emarginate in front, lower lobes distant from base of mandibles. Antennæ longer than the body; first joint stout, reaching almost to the front margin of the prothorax, armed with a strong spine behind, close to the apex; third joint nearly five times as long as the first, slightly curved; fourth joint a little longer than the first, also curved; the joints from the third to the sixth with a short thick fringe of tawny hairs beneath. Prothorax with its lateral edge distinct from the base to the apex, a strong dentiform process at the base, and with a short tooth at the middle and a blunt angular process at the apex. Elytra each with two strongly raised dorsal costæ and a short lateral costa which is distinct only near the apex. Tarsi moderately broad, with the first joint scarcely longer than the third and the claw-joint almost as long as the first three joints united. Last ventral segment rounded at the apex.

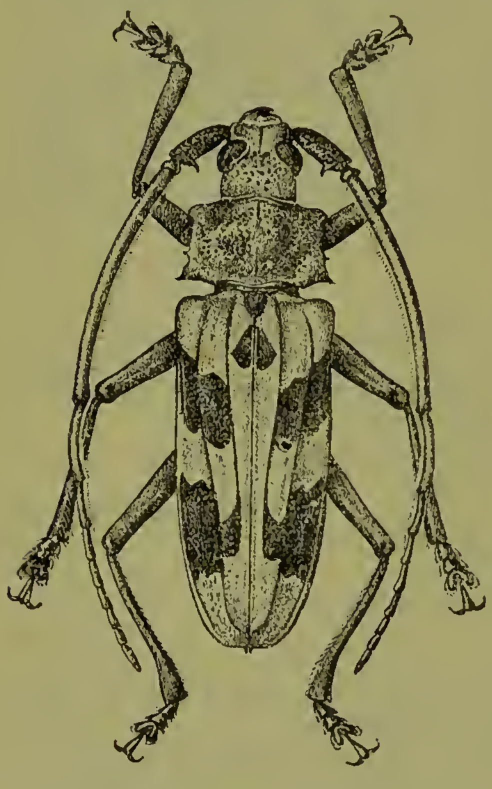


Fig. 15.
Baralipton maculosum, Thoms., ♂.

♀. Antennæ more slender than in the male, scarcely reaching beyond the middle of the elytra, without a fringe of hairs beneath.

36. **Baralipton maculosum,** *Thoms. Archiv. Ent.* i, p. 342, pl. 14, fig. 1 (1857).

Brownish black; the upper side and to a less extent the underside also clothed with a dense ashy-grey pubescence, which on the elytra gives silky reflexions; elytra with an obcordate dark brown spot of velvety appearance placed a little behind the scutellum; each elytra has two very large irregular spots of similar colour that extend from the outer margin to the inner costa, placed, one before, the other behind

the middle. Pronotum very strongly raised towards the middle and impressed with a shallow longitudinal groove; sparsely granulated towards the sides and down the middle, but closely granulated on the raised parts at each side of the same. Elytra rounded at the apex, armed at the suture with a short spine; each with two strongly raised dorsal costæ, the inner one extends from the base for about two-thirds of its length, the outer one is continued to within a short distance of the apex and at its hinder end is directed towards the suture: the lateral costa very short, distinct only on the apical half of the elytron. Legs finely and very closely granulate, faintly pubescent: tibiæ gradually and slightly widened towards their distal extremity. Fifth ventral segment of the abdomen rounded at the apex in both sexes.

Length 38–53; *breadth* 10–15 mm.

Hab. Calcutta, Assam: Sibsagor (*Atkinson*); Patkai Mts. (*Doherty*).

Genus **DINOPRIONUS.**

Dinoprionus, *Bates, Ent. Mo. Mag.* xii, p. 49 (1875).

Type, *D. cephalotes*, Bates.

Range. Northern India.

♂. Head large, elongated behind the eyes; mandibles oblique, with sharp toothless inner edges; eyes emarginate in front, upper lobes narrow, lower lobes distant from base of mandibles. Antennæ scarcely reach beyond the middle of the elytra; first joint short and stout; third thickened and asperate, twice as long as the first. Prothorax transverse, strongly bisinuate at the base, its lateral edge distinct and prominent from the base to the outer angle of the coxal cavity, thence to the apex nearly obsolete. Elytra with four distinct but not very strongly raised costæ on each; rounded and unarmed at the apex. Intercoxal part of prosternum strongly arched; that of the mesosternum narrow. Last ventral segment of the abdomen deeply emarginate behind. Tarsi narrow, with the first joint but little longer than the second; lobes of the third joint short and narrow; claw-joint twice as long as the first three joints united.

37. **Dinoprionus cephalotes**, *Bates, Ent. Mo. Mag.* xii, p. 50 (1875).

♂. Chestnut-red, the elytra fulvous; upper side bare of pubescence and glossy, underside faintly pubescent. Antennæ dark brown at the base, first joint coarsely punctured and asperate, marked with a longitudinal groove in front; third joint asperate, slightly knobbed at the apex; fourth slightly thickened and asperate, not longer than the fifth. Pronotum sparsely and finely punctured in the middle, somewhat more coarsely towards

the sides, the latter sparsely granulate. Elytra glossy, finely and rather closely punctured; innermost costa of each extending from the base for about four-fifths of its length and then turned outwards to join the second costa, this being continued a little further back and united behind with the third costa; third and fourth costæ united in front, ending some distance behind the shoulder. Legs smooth and glossy, with the tibiæ sparsely punctured; the front femora only, slightly asperate near their lower anterior edge. (Female unknown.)

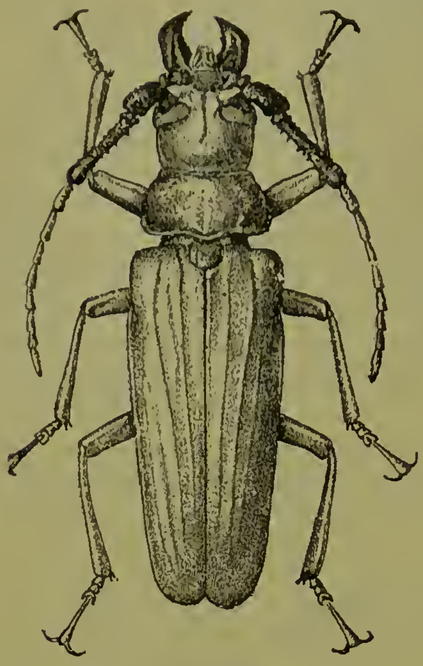


Fig. 16.
Dinoprionus cephalotes, Bates, ♂.

Length 43–63; *breadth* 13–16 mm.

Hab. Darjeeling (*Dr. Pearson*); Manipur (*Doherty*).

Genus ÆGOSOMA.

Ægosoma, *Serville*, *Ann. Soc. Ent. Fr.* i, p. 162 (1832); *Lacord. Gen. Coléopt.* viii, p. 154 (1869).

Type, *Æ. scabricorne*, Scopoli. European.

Range. Oriental Region and Mediterranean Subregion.

Head elongated behind the eyes, more or less obliquely inclined in front; eyes narrowly emarginate in front; mandibles short, oblique, toothless or armed with one small tooth on the sharp inner edge. Antennæ longer as a rule than the body in the male, but reach beyond the middle of the elytra in the female; first joint short and stout, third much longer than the first and at least as long as the fourth and fifth united. Prothorax either unarmed, or with from one to three short spines or teeth on each side; its lateral edges bowed down in the middle, more or less closely approximated to the outer angles of the coxal cavities, sharp and distinct near the base, less distinct and sometimes altogether obsolete in front. Elytra broader than the base of the prothorax, nearly parallel-sided for the greater part of their length, slightly narrowed posteriorly, rounded at the apex, either unarmed or furnished with a short spine or tooth at the suture. Legs moderately long, the hind pair longest; femora laterally compressed, with their dorsal and ventral borders nearly parallel; tarsi rather narrow, with the claw-joint at least as long as the first two joints united.

I. *Lower lobe of eye somewhat distant from base of mandible. Prothorax unarmed at the sides; its lateral edges very close to the outer angles of the coxal cavities. Elytra with feebly raised or almost obsolete costæ. Claw-joint of tarsi longer than the first three joints united.*

38. **Ægosoma ornaticolle,** *White, Cat. Coleopt. B. M., Longic.* p. 30 (1853); *id. P. Z. S.* 1853, p. 27.

♂. Dark brown, varying to reddish brown on the elytra, except at the suture and outer margins which are almost black; pronotum with four widely separated yellowish pubescent spots, two near the base and two near the apex. Antennæ reach to the apex of the elytra or a little beyond; joints third to fifth thickened and strongly scabrous; third somewhat canaliculate behind, three times as long as the first and equal in length to the fourth and fifth united, these two together being as long as the next five. Prothorax widest at the base with a slightly projecting angle on each side, narrowed in front; its lateral edges distinct only from the base to the outer angles of the coxal cavities. Elytra naked, finely and very closely granulate and opaque; each with two or three very feebly raised lines and either unarmed at the apex or with a very short sutural spine. Last ventral segment with a deep arcuate emargination behind.

Fig. 17.—*Ægosoma ornaticolle,* White, ♂.

♀. Antennæ reach to a little beyond the middle of the elytra, with joints third to fifth less thickened and scabrous than those of the male. Last ventral segment more broadly emarginate behind. Ovipositor exserted, long, broad and flat near its base, narrow and subcylindrical towards the end.

Length 30–50; *breadth* 8½–15 mm.

Hab. Assam; Manipur (*Doherty*); Burma: Ruby Mines (*Doherty*).

39. **Ægosoma marginale,** *Fab.* (Cerambyx) *Syst. Ent.* p. 169; *Oliv. Ent.* iv, no. 67, p. 7, no. 66, tab. 12, fig. 47; *White* (Ægosoma), *P. Z. S.* 1853, p. 27; *Pascoe, Trans. Ent. Soc.* (3) iii, p. 679 (1869).

Ægosoma javanicum, *Redtenb. Reise Novara,* ii, p. 202 (1868).

♂. Reddish brown; covered above with a rather thin, tawny pubescence, the front and hind margins of the pronotum and the sutural and lateral margins of the elytra almost black. Antennæ nearly half as long again as the body; the third joint

three times as long as the first and about equal in length to the fourth and fifth united; the first five joints asperate, the third and succeeding joints with a short hair-fringe beneath. Prothorax rounded in the middle on each side, narrowed in front and also, but to a less extent, towards the base, the hind angles rounded off; lateral edge distinct only from the basal margin to the outer angle of the coxal cavity, completely obliterated in front. Elytra pubescent, costæ obsolete. Last ventral segment with a semicircular emargination at the apex.

♀. Antennæ reach to the apex of the elytra, more slender than in the male. Fifth ventral segment with a broad deep emargination behind. Ovipositor broad at the base, narrow and subcylindrical towards the extremity.

Length 20–38; *breadth* 5–10 mm.

Hab. Upper Burma: Teinzo (*Fea*). China; Cochin China; Hainan I.; Siam; Malay Peninsula; Sumatra; Java; Borneo; Celebes.

II. *Eyes larger, with lower lobe less distant from base of mandible. Prothorax with one or two spines on each side; its lateral edges very close to the outer angles of the coxal cavities. Elytra each with two distinct costæ, but without a lateral costa. Claw-joint of tarsi equal in length to the first three joints united.*

40. **Ægosoma cingalense**, *White, Cat. Coleopt. B. M., Longic.* i, p. 31 (1853); *id. P. Z. S.* 1853, p. 27 (♂).
Ægosoma angustatum, *Bates, Ent. Mo. Mag.* xii, p. 51 (1875) (♀).

♂. Dark brown; covered above, especially on the prothorax and elytra, with a dense drab-coloured pubescence. Antennæ longer than the body; third and fourth joints somewhat thickened and like the basal joints, closely granulated and pubescent; third joint about four times as long as the first and twice as long as the fourth; last seven joints almost naked, finely punctulate, somewhat glossy. Prothorax narrowed in front; with a short spine on each side behind the middle and a projecting angle or tooth at the base; lateral edge obsolete in front; notum with a broad concave depression in the middle and two or three swellings towards each side. Inner costa of each elytron most strongly raised near the base, gradually fading away beyond the middle, the outer one faint near the base, but sharp and distinct from the middle onwards, ending at a short distance from the apex; apex rounded on the sutural as well as on the outer side. Body beneath and legs less densely pubescent. Third joint of tarsi deeply bilobed, with the lobes rounded at the ends. Last ventral segment very feebly emarginate at the apex.

♀. Reddish brown; nearly bare of pubescence except on the breast. Elytra finely granular and opaque, but with the sutural edge and costæ glossy. Antennæ slender, entirely naked

and glossy, reaching to about the posterior fifth of the elytra. Fifth ventral segment feebly emarginate at the apex. Ovipositor short, dorso-ventrally compressed.

Length 25–45 ; *breadth* 6–12 mm.

Hab. Ceylon.

41. **Ægosoma tibiale,** *White, Cat. Coleopt. B. M., Longic.* i, p. 32 (1853) ; *id. P. Z. S.* 1853, p. 28.

♂. Dark brown; with the elytra somewhat reddish brown, naked, impunctate and glossy. Antennæ longer than the body ; third joint slightly thickened, three times as long as the first, both closely granulated ; fourth joint sparsely punctured, less than half the length of the third and very little longer than the fifth. Prothorax with its lateral edge distinct from the base up to the anterior margin, furnished with a spine at the base, another just behind the middle and with an angulate or dentiform process in front ; notum convex, very closely punctured, sparsely setose towards the sides. Elytra: each with two dorsal costæ, the inner one disappears a little beyond the middle, the outer costa is continued back to end a short distance before the apex. Tarsi narrow; the first three joints of equal width, together about as long as the claw-joint. Last ventral segment arcuately emarginate at the apex.

♀. Antennæ reach to about the posterior third of the elytra; the third joint not thickened and less closely granulated than in the male. Fifth ventral segment deeply emarginate in the middle at the apex. Ovipositor short, dorso-ventrally compressed.

Length 22–46 ; *breadth* 6–12 mm.

Hab. Northern India.

42. **Ægosoma buckleyi,** *Gahan, A. M. N. H.* (6) xiv, p. 227 (1894).

♂. Dark brown ; varying on the elytra, underside and legs to reddish brown. Antennæ a little longer than the body ; first three joints asperate and opaque, the third four times as long as the first and equal in length to the three succeeding joints united. Prothorax with its lateral edge distinct from the base to the anterior margin, furnished with a spine at the base, a short spine just behind the middle and a projecting angle or tooth (sometimes obsolete) close to the front margin ; notum convex, closely punctured, furnished with sparse erect hairs towards the sides. Elytra more than $2\frac{1}{2}$ times as long as broad, bare of pubescence and very closely granulate or rugulose ; each with two distinct dorsal costæ, the inner costa less strongly raised beyond the middle and united with the outer one at about one-fifth from the apex. First three tarsal joints united about equal in length to the claw-joint, the third joint only slightly wider than the second. Last ventral segment emarginate in the middle behind.

♀. Antennæ reach to about the posterior third of the elytra,

third joint closely and somewhat asperately punctured towards the base, less closely towards the apex. Fifth ventral segment with a broad, deep, arcuate emargination at the apex. Ovipositor short, dorso-ventrally compressed.

Length 40–45; *breadth* 10½–12 mm.

Hab. Northern India: Dalhousie.

III. *Eyes large, with lower lobe reaching close to base of mandible. Antennæ with joints 3rd to 11th sharply edged in front. Prothorax with its lateral edge at some distance from the coxal cavity and the prosternal suture, the interspace marked in the female by a reddish callosity. Elytra; each with at least three strongly raised costæ, two dorsal, the third lateral. Claw-joint of tarsi shorter than the first three joints united.*

43. **Ægosoma sulcipenne,** *White, Cat. Coleopt. B. M., Longic.* i, p. 31 (1853).

♂. Dark brown, the elytra and antennæ reddish brown; sparsely covered with yellowish tawny pubescence which is restricted on the elytra to linear tracts lying along the channels between the costæ. Antennæ a little longer than the body; third joint a little more than twice as long as the first, and about equal in length to the fourth and fifth united. Prothorax with its lateral edge distinct, extended into an angulate process at the base and into a short blunt tooth (sometimes obsolete) at the front angle; notum finely granulate. Elytra finely granulate; each with two acute dorsal costæ extending from the base, the inner one for about two-thirds of its length, the outer one almost to the apex; a sharp lateral costa runs from a little behind the shoulder to the apical margin and a very short fourth costa lies midway between the outer dorsal and the lateral costa; apex with a sharp spine at the suture. Last ventral segment subtruncate behind. Claw-joint of tarsi as long as the first two joints united.

♀. Antennæ reach to about the posterior third of the elytra. Last ventral segment subtruncate behind. Ovipositor short and compressed.

Length 15–25; *breadth* 4–7 mm.

Hab. Burma: Teinzo (*Fea*), Thayetmyo (*Bingham*); Tenasserim; Andaman Islands (*Capt. Wimberley*).

44. **Ægosoma bowringi,** *Gahan, A. M. N. H.* (6) xiv, p. 226 (1894).

Reddish brown; rather densely clothed with a short tawny pubescence, which covers the whole of the elytra with the exception of the costæ; the latter character especially serves to distinguish the species from *Æ. sulcipenne*, White, with which it agrees very closely in structure.

Length 21–35; *breadth* 6–10 mm.

Hab. Bengal; Assam: Sylhet, Patkai Mts. (*Doherty*); Upper Burma: Northern Chin Hills (*Watson*).

45. **Ægosoma costipenne,** *White* (Megopis), *Cat. Coleopt. B. M., Longic.* i, p. 28, pl. 2, fig. 2 (1853).
Ægosoma lacertosum, *Pasc. A. M. N. H.* (3) xix, p. 413 (1867).

♂. Ferruginous red and opaque, the costæ of the elytra nitid and of a brighter red colour. Upperside almost bare of pubescence. Antennæ a little longer than the body, the third and a few of the following joints tipped with black at the apex, the third rather more than twice as long as the first. Prothorax with a sharp angular process at the base on each side; unarmed at the anterior angles; lateral edge distinct from the base to the anterior margin; notum very finely granulate. Elytra each with four costæ similar in length and position to those of *Æ. sulcipenne*; the intervals between the costæ covered with very minute brownish granules; apex subtruncate near the suture, armed with a short spine at the suture. Last ventral segment subtruncate at the apex.

♀. Antennæ reaching to the posterior third of the elytra. Prothorax with a reddish callosity that occupies the space between the prosternal suture and the lateral edge. Fifth ventral segment truncate at the apex. Ovipositor short and compressed.

Length 25–30; *breadth* 7–9 mm.

Hab. Assam; Sikhim; Manipur (*Doherty*).

46. **Ægosoma terminale,** sp. n.

♂. Reddish brown, elytra fulvous. Upperside with a very short sparse pubescence, underside with a longer and denser pubescence. Antennæ a little longer than the body; third joint twice as long as the first and about equal in length to the fourth and fifth united. Prothorax with a strong angular process at the base on each side and a tooth at each of the anterior angles; lateral edge distinct from the base to the anterior tooth; notum finely granulate, a few coarser granules on each side of the middle. Elytra each with two distinct dorsal costæ, the inner one extends for about three-fourths the length of the elytron from the base, a distinct lateral costa and a short, very feebly raised, indistinct costa on the posterior half between the lateral and the outer dorsal costa; apex obliquely subtruncate towards the suture, armed at the suture with a rather long, sharp spine.

This species closely resembles *Æ. bowringi* in size and colour, but differs as follows: a stronger process at the base of the prothorax on each side; the body above with a much sparser and shorter pubescence; the inner dorsal costa of each elytron prolonged farther back, its apex less rounded and armed with a longer spine.

Length 29; *breadth* 8½ mm.

Hab. Ceylon.

Genus **DANDAMIS**, g. n.

Type, *D. nigropunctatus*, Auriv.

Range. Southern India.

Allied to *Ægosoma*, Serv., and *Sarmydus*, Pasc., but differs from both as follows:—Epipleural fold of the elytra very wide near the base. Eyes large, the lower lobe extended close up to the genal margin. Antennæ of ♂ longer, and those of ♀ shorter, than the body; first joint short, not reaching to the hind margin of the eye; third to eleventh rather slender, slightly compressed, the front edge of all, and the hind edge of all but the third, sharply carinate; third one-fourth longer than the fourth, fifth to eleventh successively and gradually shorter. Prothorax transverse, rounded at the sides; the lateral edges distinct, but not prominent, with a feeble tooth behind the middle; pleura with a finely and very densely punctured area that extends from near the front margin to a little past the outer angle of the coxal cavity. Elytra long, rounded at the apex. Legs shorter and more slender than in the allied genera; first joint of the hind tarsus as long as the next two joints united in the ♂, shorter in the ♀. Last ventral segment truncate at the apex in ♂; emarginate in ♀.

47. **Dandamis nigropunctatus**, *Auriv.* (Cyrtonops?) *Ent. Tidskr.* xviii, p. 243, pl. 3, fig. 6 (1897).

Sparsely furnished with long grey hairs above, more densely hairy beneath especially on the breast. Head and prothorax blackish brown, sometimes more or less testaceous in the middle; elytra pale yellow mottled with blackish brown. Head closely punctured, impressed with a median groove that extends from the clypeus to the vertex; eyes subapproximate above, rather widely separated below. First joint of antennæ coarsely punctured, the others finely punctate and sparsely ciliated, the last five or six faintly covered with very short pubescence. Prothorax rather densely punctured; the disc with a slight depression in the middle and two feeble elevations in front; the densely punctate area on each side below the lateral carina slightly raised, nearly flat in the ♂, somewhat convex in the ♀, limited below and behind by a raised line or carina. Elytra about two and a half times as long as broad, rounded and unarmed at the apex, strongly but very irregularly punctured; the punctures, which are nearly black in colour, are closely aggregated here and there in patches and more widely separated on other parts, thus giving rise to the mottled appearance of the elytra; each elytron with two or three feebly raised, nearly

Fig. 18.
Dandamis nigropunctatus, Auriv., ♂.

obsolete, obtuse carinæ. Body beneath varying from dark brown to testaceous; legs dark brown, the femora testaceous at the base, claw-joint of tarsi almost equal in length to the first and second joints united.

Length 19–34; *breadth* 5–9 mm.

Hab. Nilgiri Hills (*H. L. Andrewes*); Tranquebar.

Genus SARMYDUS.

Sarmydus, *Pasc. A. M. N. H.* (3) xix, p. 410 (1867); *id. Trans. Ent. Soc.* (3) iii, p. 676 (1869); *Lacord. Gen. Coléopt.* viii, p. 150 (1869).

Type, *S. antennatus*, Pasc.

Range. Northern India to Borneo.

♂. Head short, almost vertically deflexed in front; mandibles short, abruptly incurved and acute at tip, crossing one another when closed; labrum very short and broad; eyes large and prominent, emarginate in front; upper lobes not widely separated from each other, lower lobes closely approximated to base of mandibles in front. Antennæ a little longer or shorter than the body; first joint short, obconical; third to tenth strongly compressed, longitudinally carinated, produced into a sharp angle or tooth at the apex on the posterior side; third twice as long as the first, broader, but scarcely longer, than the fourth; fifth to tenth successively shorter and narrower. Prothorax transverse, with distinct lateral edge placed at some distance from the outer angle of the acetabulum and produced into an acute spine in the middle; each flank with a closely punctured area, sometimes completely circumscribed by a raised margin, lying between the prosternal suture and the anterior half of the lateral edge. Elytra broader than the prothorax, twice or more than twice as long as broad, rounded and unarmed at the apex; each with three distinctly raised costæ. Legs moderately long, laterally compressed; first joint of hind tarsus a little longer than the second and third united. Prosternum strongly arched between the coxæ, slightly projecting beyond them posteriorly. Last ventral segment slightly sinuate at the apex.

♀. Antennæ shorter and much narrower than those of the male, the third and fourth joints scarcely broader than the fifth and following joints; the third nearly half as long again as the fourth. Elytra relatively longer than in the male.

48. **Sarmydus subcoriaceus**, *Hope* (Prionus), *Gray's Zool. Misc.* p. 27 (1831).

♂. Dark brown or reddish brown in colour; the elytra usually paler than the head and prothorax; third and following joints of the antennæ reddish or fulvous, sometimes narrowly edged with black at the apex. Head closely, subrugosely punctured. Antennæ a little longer than the body; first joint nitid, coarsely

punctured; third to tenth opaque, oblique at apex, furnished above and below with two or three longitudinal carinæ, third very little longer than the fourth. Prothorax closely and somewhat rugosely punctured above; the closely punctured area on each flank convex, extending from the median spine to the anterior margin. Elytra more than twice as long as broad, glossy, closely and strongly punctured, the interstices between the punctures are convexly raised and form a fine network of ridges; naked above, but with the apical and postero-lateral margins fringed with very short tawny hairs; costæ of elytra distinct, but not very strongly raised. Underside and legs sparsely pubescent.

♀. Antennæ reaching to the posterior fifth of the elytra; third and following joints very feebly angulate behind at the apex; third much longer, but scarcely wider, than the fourth. Elytra two and a half times as long as broad.

Length 17–23; *breadth* 5–7 mm.

Hab. Nepal.

49. **Sarmydus antennatus**, *Pasc. A. M. N. H.* (3) xix, p. 410 (1867); *id. Trans. Ent. Soc.* (3) iii, p. 677 (1869).

♂. Dark brown, varying to reddish brown in immature specimens; the antennæ from the third or fourth joint reddish testaceous, with each of the joints very often narrowly edged with black at the apex. Prothorax closely and finely granulate above; the closely punctured area on each of its flanks flattened or slightly concave, completely circumscribed by a raised smooth line that extends from the median spine not quite up to the anterior margin. Elytra not more than twice as long as broad, closely punctured and more or less opaque, the interstices between the punctures flat; the three costæ on each strongly raised and acute. Other characters as in *S. subcoriaceus*, Hope.

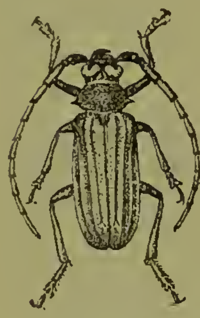


Fig. 19. *Sarmydus antennatus*, Pasc., ♂.

♀. Antennæ shorter and narrower, the third joint nearly half as long again as the fourth. Elytra almost two and a half times as long as broad.

Length 16–30; *breadth* 5–9 mm.

Hab. Assam; Manipur; Burma; Andaman and Nicobar Islands; Java; Borneo.

Group *MONODESMINI.*

Front of the head vertical or subvertical; the antennæ inserted at some distance from the base of the mandibles, thus giving room for the lower lobes of the eyes, which are usually very large, to reach anteriorly up to or almost up to the front.

Lateral margins of prothorax in general feebly developed, sometimes (*Anœme*) consisting merely of a fine carina that extends on each side from the basal margin to the outer angle of the coxal cavity. Wing-venation of the usual Prionine type.

This group, as here defined, is a provisional one and corresponds in part only to Lacordaire's group of the same name. For two of the genera included by him, I have formed a separate group—the *Philini*. Two other genera—*Cyrtonops* and *Crinosoma*, which were imperfectly known to him and doubtfully placed in the group—will also have to be excluded; one belongs to the *Disteniinæ* and the other to the *Cerambycinæ*. *Anœme*, the only genus of the group included in our fauna, is represented by two species in Africa and one, recently discovered by Mr. H. L. Andrewes, in the Nilgiri Hills, Southern India. M. Lameere (Faune Ent. de l'Afrique Trop., Longicornes, p. 47, 1903) has associated this genus with *Plectogaster*, Waterh., placing both in the group *Anacolini*. The *Monodesmini* have, it is true, a fairly close relationship with the *Anacolini*, as they have also with the *Ægosomini*; they ought therefore perhaps to be merged in one or other of these two groups. With *Plectogaster*, however, the case is different. Notwithstanding the fact that this genus has been placed in the *Prioninæ* not only by M. Lameere but also by two other experienced entomologists, I am decidedly of opinion that it ought not to be so placed, but was rightly referred by its author to the *Cerambycinæ*, chiefly for these reasons: (1) the prothorax has no true lateral margin, (2) the front coxæ though transverse are not more so than in many *Cerambycinæ*, (3) the inner lobe of the maxillæ is quite fully developed, (4) the mesonotum has a large undivided stridulatory area and (5) the wing-venation resembles that of no true *Prioninæ*. What M. Lameere describes as a lateral margin, consists of a sharp ridge or carina that extends down the side of the prothorax close to, and almost parallel with, its hind margin, approaching more closely in fact to the hind margin at its lower end than at its upper. Such a ridge, though less feebly developed, is not uncommon in the *Cerambycinæ*, and is to be found co-existing with the true lateral margin in some *Prioninæ*.

Genus **ANŒME**.

Anœme, *Gahan, Trans. Ent. Soc.* 1890, p. 299.

Type, *A. nigrita*, Chevr. (*Œme*), a West-African species.

Range. West and East Africa, and Southern India.

♂. Head with the front vertically and the mandibles either obliquely or subvertically inclined; last joint of palpi cylindrical; eyes large, coarsely facetted, deeply emarginate. Antennæ inserted at some distance from the base of the mandibles, setose, half as long again as the body; first joint short, stout, thickened towards the apex; third to tenth compressed to a sharp edge in front and rectangular at the apex; third twice as long as the first,

the others gradually shorter. Prothorax relatively small (in the Indian species shorter and narrower than the head), transverse, rounded in the middle at each side, furnished with a feeble lateral carina curved downwards from the base to the outer angle of the coxal cavity. Elytra much broader than the prothorax and about six times longer, rounded at the apex; each with a sharp longitudinal carina along the middle. Legs subequal, laterally compressed; hind femora much shorter than the abdomen; first joint of hind tarsi shorter than the next two united, claw-joint long. Front coxæ prominent, strongly transverse, almost contiguous; the intercoxal part of the prosternum very narrow; middle coxæ also almost contiguous, the mesosternum greatly reduced in size.

50. **Anœme andrewesi**, sp. n.

Entirely of a testaceous or fulvous-red colour, the elytra, especially towards the apex, the legs and the body beneath of a somewhat paler tint. Head punctured sparsely in front, closely and subrugosely on the top and at the sides; mandibles almost vertically inclined; lower lobes of the eyes very large, extended forwards between the antennæ and the base of the mandibles, the genæ in consequence reduced each to a narrow oblique strip. Prothorax shorter and narrower than the head, closely and rather finely punctured, impressed with a sinuate groove just behind the raised front margin, a feeble transverse groove close to the base, and a broader groove or channel along the middle. Elytra strongly and rather closely punctured, sparsely setose above and somewhat thickly setose at the apical margin; each with a sharp dorsal carina which stops short a little before the base in front and at about an equal distance from the apex behind. Dorsal edge of tibiæ very narrow and somewhat carinate.

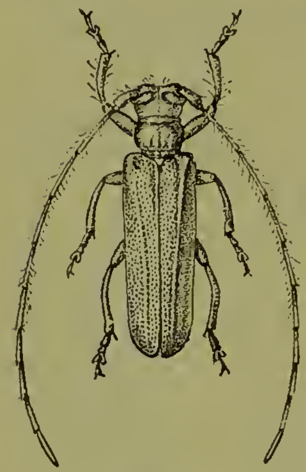


Fig. 20.
Anœme andrewesi, Gahan, ♂.

Length 14; *breadth* 3 mm.

Hab. Nilgiri Hills (*H. L. Andrewes*).

Group *PHILINI*.

Head somewhat elongated behind the eyes and more or less narrowed towards the occiput, subvertically inclined in front; labrum distinct, joined by a transverse suture to the clypeus; gula without mentigerous process; eyes large, emarginate. Antennæ inserted rather close to the base of the mandibles, the

first joint very short, the third about twice as long as the first and subequal in length to the fourth. Prothorax rather small, its lateral margins feebly developed and sometimes partly or wholly obsolete; when present they curve downwards from the basal margin and extend forwards to a greater or less extent, but always at some distance from the outer angles of the coxal cavities. Mesonotum with or without a stridulatory area, this when present is divided by a median line or groove. Front coxæ prominent, strongly transverse; the intercoxal process attaining to a level with the coxæ and not prolonged behind them, its posterior face vertical and very narrow. Tarsi rather long, with the third joint cleft to the middle only; paronychium of claw-joint setose. Wings with vein Cu 1 joined by a cross vein to Cu 2 with one or two branches behind.

Owing to the richness of their wing-venation, the two genera included in this group occupy a somewhat exceptional position among the *Prioninæ* and appear to be primitive in relation to the other members of the subfamily. Their wing-venation greatly resembles that of *Oxymirus* (Intro. fig. 5) and other genera of *Lepturinæ*. In some other respects also the *Philini* show an affinity with the latter subfamily. They are closely related to *Mantitheus*, Fairm., a genus that inhabits Northern China, and are related also, but less closely, to the Mediterranean genus *Vesperus*, Latr., which some authors class with the *Lepturinæ*.

Key to the Genera.

Mesonotum without stridulatory area	DŒSUS, p. 55.
Mesonotum with stridulatory area	PHILUS, p. 57.

Genus DŒSUS.

Dœsus, *Pascoe, Journ. Ent.* i, p. 367 (1862); *Lacord. Gen. Coléopt.* viii, p. 161 (1869).

Type, *D. telephoroides*, Pasc.

Range. Central and Southern India, Ceylon, Siam, China, Formosa and Borneo.

♂. Head subvertical in front, slightly elongated and narrowed behind the eyes; mandibles rather long, sharp at the end, crossed at the tips when closed; labrum rather large; antennal supports narrow and transverse; eyes large and prominent, with the lower lobes extended close up to the genal edges in front. Antennæ about one-third longer than the body, subserrate; first joint very short, scarcely twice as long as the second; third twice as long as the first; fourth to sixth successively and gradually longer; third to eleventh covered with a short pubescence. Mesonotum canaliculate along the middle; without stridulatory area. Prothorax slightly transverse; its lateral margin in the form of a carina extends to a greater or less distance from the base and at some distance from the outer angle of the coxal

cavity. Elytra broader than the prothorax, nearly three times as long as their width across the base, narrowed and rounded at the apex, furnished above with some feebly raised lines. Legs rather long; the femora fringed with hairs beneath; tarsi somewhat long, with the first joint as long as the second and third united, and the cleft of the third not extended past the middle. Intercoxal process of prosternum strongly raised, vertical and very narrow behind, not resting on the mesosternum; that of the mesosternum narrow and triangular, not separating the coxæ behind.

♀. Broader and more robust than the male, with the elytra relatively shorter, and the antennæ slender and much shorter than the body.

51. **Dœsus telephoroides**, *Pasc. Journ. Ent.* i, p. 367 (1862).

♂. Head and prothorax reddish testaceous in colour, the elytra, legs, and underside yellowish-testaceous; covered above with a short rather faint greyish pubescence. Antennæ with the third to tenth joints rather feebly angulate at the apex on the anterior side. Prothorax with its lateral margins extended from the base to a little in front of the middle of each side; the pronotum sparsely and finely punctured in the middle, more closely at the sides. Elytra closely and rather finely punctured, covered with faint greyish pubescence and furnished with some very feebly raised longitudinal costæ. Body beneath pubescent; apex of last ventral segment very feebly sinuate in the middle. The femora have each a channel beneath filled with pale tawny or greyish hairs that form a fringe.

♀. Not known.

Length 13–15; *breadth* 3–3¾ mm.

Hab. Central Provinces: Jabalpur.

52. **Dœsus taprobanicus**, sp. n.

♂. Head, prothorax and base of the elytra reddish testaceous in colour, the remaining parts of a paler, yellowish-testaceous covered with a faint greyish-tawny pubescence. Antennæ with the third to eighth joints rather strongly angulate at the apex on the anterior side. Prothorax with its lateral margins extended from the base not quite up to the middle of each side; pronotum closely and finely punctured all over. Elytra closely punctured, broad at the base, strongly narrowed towards the middle, thence to the apex more gradually narrowed; each with two fairly distinct dorsal costæ and one or two feebly raised nearly obsolete lateral costæ. The femora have each a channel and fringe of hairs beneath. Last ventral segment rounded at the apex.

From *D. telephoroides*, Pasc., this species is distinguishable by its more strongly serrate antennæ, shorter prothoracic lateral carinæ, more closely punctured pronotum and by its elytra that

are relatively broader at the base, narrower in the middle and more distinctly costate above.

Length 20; *breadth* 5 mm.

Hab. Ceylon (*in coll. Oberthür*).

Genus PHILUS.

Philus, *Saunders, Trans. Ent. Soc.* (2) ii, p. 110 (1853); *Lacord. Gen. Coléopt.* viii, p. 159 (1869).

Type, *P. antennatus*, Gyllenh., a species from China.

Range. China, Northern India and Malay Peninsula.

Mesonotum with a stridulatory area, which is divided by a median line or groove. In other respects the genus agrees with *Dœsus*, Pasc. The species as a rule are somewhat larger than those of the latter genus and have the lateral margins of the prothorax fairly well-developed. But the single species that occurs in India is smaller and narrower than the others and has no trace of a lateral margin to the prothorax.

53. **Philus globulicollis**, *Thoms. Essai Classif. Ceramb.* p. 298 (1861).

♂. Head, prothorax and base of elytra reddish-testaceous, the rest of the body and elytra yellowish-testaceous or fulvous in colour; covered above with a very short pale tawny pubescence; the underside sparsely pubescent. Head closely punctate. Antennæ about one-fifth longer than the body; the joints from the third to the tenth acutely angulate at the apex on the anterior side, the third and fourth somewhat less acutely so than the others. Prothorax slightly transverse, subcylindrical, a little rounded at the middle of each side and without lateral margins; the notum very closely punctured at the sides, somewhat less closely in the middle. Elytra densely punctured, much broader than the prothorax and three times as long as broad; each with two very feebly raised dorsal lines. Hind femora and hind coxæ with a channel and thick fringe of hairs beneath; middle femora with a short channel and thick fringe of hairs near the base; the front femora flattened or slightly concave beneath, with a sparse fringe of hairs at each side. Third joint of tarsi cleft to the middle. Last ventral segment truncate at the apex.

Fig. 21.—*Philus globulicollis*, Thoms., ♂.

♀. Like the male in form; the antennæ slender, not reaching past the middle of the elytra; the femora not channelled nor fringed with hairs beneath; the last ventral segment rounded at the apex.

Length 21–22; *breadth* $5\frac{1}{4}$ mm.

Hab. Northern India.

Subfamily II. DISTENIINÆ.

Group Disteniides, *Lacord. Gen. Coléopt.* ix, p. 225 (1869).
Tribe Disteniini, *Leconte & Horn, Classif. Col. N. Amer.* p. 307 (1883).

Head elongated, more or less gradually narrowed behind the eyes; the latter transverse, feebly emarginate or entire; front vertical and very short, almost limited to the transversely raised antennal supports; clypeus oblique; mandibles with truncate or scalpriform apical edge; gula produced anteriorly between the bases of the maxillæ so that it forms a distinct mentigerous process; ligula corneous. Antennæ inserted before the eyes, close to the base of the mandibles. Front coxæ large, globular, their acetabula usually open behind and, except in *Cyrtonops*, not angulate on the outer side, the epimera having coalesced with the prosternum to form a suture. Acetabula of middle coxæ closed or, exceptionally, open on the outer side. Episterna of metathorax very narrow, gradually attenuated behind. Middle tibiæ most frequently with an oblique notch on the lower part of the outer border. Wing-venation of the Lepturine type, always without a cell in the course of vein A 1.

The *Disteniinæ*, though placed by Lacordaire as a group among the *Cerambycides*, were given a prominent position in his arrangement of that subfamily, in which also he included the *Lepturinæ*. Leconte & Horn (Classif. Col. N. America), while retaining them also in the *Cerambycinæ* as one of their Lepturoid tribes, have suggested that they are a primitive group, a suggestion arising from a consideration of the structure of *Distenia*, one of the most specialised of the genera in the group. The relationship between the *Disteniinæ* and the *Lepturinæ* is, no doubt, a close one, but the differences between them are at the same time so strong that I find a difficulty in placing them both in the same subfamily, and therefore treat the *Disteniinæ* as a subfamily in themselves. The genera are few in number, and, with the exception of *Cyrtonops* and *Dynamostes*, are all very closely related.

Synopsis of the Genera.

A. Antennæ shorter than the body; not furnished with long close-lying hairs beneath.
  a. Acetabula of front coxæ angulate outwards, open behind .... CYRTONOPS, p. 59.
  b. Acetabula of front coxæ rounded, closed behind .... DYNAMOSTES, p. 61.
B. Antennæ as long at least as the body and generally much longer; furnished beneath with very long close-lying hairs.
  a. Eyes somewhat coarsely facetted; femora fusiform or subcylindrical.

a'. Femora subcylindrical; first joint of hind tarsi longer than the second and third united.
  a². Femora rather stout, the hind pair not reaching to the apex of the elytra; prothorax not striate . . . . DISTENIA, p. 62.
  b². Femora slender, the hind pair reaching to the apex of the elytra; prothorax transversely striate in part . . . . TYPODRYAS, p. 65.
b'. Femora fusiform; first joint of hind tarsus shorter than the second and third united . . . . MELEGENA, p. 66.
b. Eyes rather finely facetted; femora clavate. NERICONIA, p. 67.

Genus **CYRTONOPS.**

Cyrtonops, *White, Cat. Coleopt. B. M., Longic.* p. 32 (1853).
Cladopalpus, *Lansb. Notes Leyd. Mus.* viii, p. 35 (1886).

Type, *C. punctipennis*, White.
Range. Northern India, Burma, Tonkin, Siam, Sumatra and Java.

♂. Head strongly exserted, gradually narrowed backwards from the eyes; eyes transverse, large and prominent, with feebly sinuate front margin; front very short; clypeus short, transverse, submembranous near its front margin; mandibles stout, abruptly incurved below, with sharp subtruncate or bidentate apical edge; maxillæ bilobed, their palpi very long, with the second joint five or six times as long as the first, the third very short, the fourth nearly as long as the second and furnished with a long bent ramus arising near its base; labial palpi short, with thickened terminal joint; mentigerous process of submentum distinct and rather long. Antennæ inserted very close to the base of the mandibles, extended some distance beyond the middle of the elytra, sparsely pubescent; first joint as long as the head, slightly curved, gradually thickened towards the apex; third shorter than first and slightly longer than fourth; fourth to eleventh subequal in length but successively narrower. Prothorax with a short conical tubercle on each side. Mesonotum with stridulatory area, divided by a median groove. Elytra gradually but slightly narrowing backwards, rounded at the apex, very strongly subseriately punctured. Legs moderately long, with strongly thickened femora, the hind pair longer and thicker than the others and either denticulate or spinulose beneath; tarsi rather broad, the third joint not cleft down the middle, but deeply channelled above, with the minute fourth joint inserted in the normal position at its base. Front coxæ slightly angulate on the outer side, rounded and almost contiguous on the inner, the prosternal process very short and the coxæ separated only by a thin vertical plate; their acetabula open behind. Acetabula of middle coxæ extend to

the epimera. Metathoracic episterna very narrow, acuminate posteriorly.

♀. Maxillary palpi normal, but with the second joint relatively long. Antennæ a little shorter than in the male, and the hind femora less thickened.

54. **Cyrtonops punctipennis,** *White, Cat. Coleopt. B. M., Longic.* p. 33, pl. 2, f. 3 (1853).

Cladopalpus hageni, *Lansb. Notes Leyd. Mus.* viii, p. 36 (1886); *Van de Poll, Notes Leyd. Mus.* xii, p. 141 (1890).

Varying from cinnamon-brown to dark brown in colour, glossy, sparsely furnished with short, erect, tawny setæ. Head and prothorax closely, subrugosely punctured, the disc of the prothorax with one or two small, smooth, impunctate spaces. Elytra very strongly punctured; the punctures arranged in more or less regular rows on the outer part of the disc, with narrow subcostiform intervals between some of the rows; the interstices between the large punctures sparsely covered with minute setigerous punctures. Legs darker at the knees, sometimes entirely dark brown; hind femora not very much thicker than the front ones, slightly denticulate along each side of the lower face.

Length 18–25; *breadth* 5–7 mm.

Hab. Himalayas; Assam; Burma; Sumatra.

C. hageni, Lansb., from Sumatra, is here given as a synonym on the authority of Van de Poll.

55. **Cyrtonops nigra,** sp. n.

♂. Black and glossy. Head closely rugosely punctured, impressed with a distinct median groove that extends from the clypeus to the occiput. Prothorax closely rugosely punctate, but with a small, smooth, feebly raised tubercle a little in front of the middle of the base. Elytra very strongly punctured, the punctures in more or less regular rows along the disc, somewhat irregularly placed on the sides, the interstices sparsely covered with minute setigerous punctures; each with one or two distinct costæ, the inner costa, when present, lying between the second and third rows of punctures, the outer one between the fourth and fifth rows. Hind femora very much thicker than the others and strongly toothed along each side of the lower face.

Fig. 22.—*Cyrtonops nigra*, Gahan, ♂.

This species is readily distinguishable from *C. punctipennis*, White, by its black colour and the much

thicker and more strongly denticulate hind femora of the male.

Length 13–18; *breadth* 4–5 mm.

Hab. Manipur (*Doherty*).

Genus DYNAMOSTES.

Dynamostes, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 90, pl. 22, fig. 1 (1857); *Lacord. Gen. Coléopt.* viii, p. 196 (1869).

Type, *D. audax*, Pasc.

Range. Sikhim and Manipur.

♂. Head elongated behind the eyes and gradually narrowed backwards, but becoming parallel-sided, thus forming a sort of neck near the occiput; eyes transverse, smaller and less prominent than in *Cyrtonops*; mandibles with a truncate but rather short edge at the apex, each with an inner tooth between the middle and base; maxillary palpi normal, longer than the labial; submentum short but distinct. Antennæ inserted very close to the base of the mandibles, extended to the middle of the elytra, sparsely pubescent; first joint not more than half as long as the head, slightly curved, gradually thickened towards the apex; third joint nodose at the apex, shorter than the fourth; fourth to eleventh subcanaliculate beneath. Prothorax subcylindrical, longer than broad, slightly rounded at the sides. Mesonotum with stridulatory area divided by a median impressed line. Elytra strongly punctured in longitudinal rows. Femora strongly thickened, the hind pair much longer and thicker than the others; tibiæ sharply angulate at the apex on the outer side, the middle pair with a sinus, thickly beset with setæ on the outer margin below the middle, the hind pair deeply notched on the inner side close to the apex. Prosternum moderately broad between the coxæ, dilated behind to meet the epimera, the acetabula, which are rounded on the outer side, are thus completely closed behind. Mesothoracic epimera shut off from the acetabula by a lateral prolongation of the metasternum. Episterna of metathorax very narrow, acuminate behind.

This remarkable genus, of which only a single species is known, constituted one of Lacordaire's tribes of "Aberrant Cerambycides." But, like *Cyrtonops*, it falls naturally enough into the *Disteniinæ* and in some respects agrees even better than *Cyrtonops* with the general characters of that subfamily.

56. **Dynamostes audax**, *Pasc. Trans. Ent. Soc.* (2) iv, p. 90, pl. 22, fig. 1 (1857); *Lacord. Gen. Coléopt.* viii, p. 197 (1869).

Of a glossy chestnut-brown colour, somewhat darker above and more reddish beneath. Head strongly but not thickly punctured above. The antennæ do not reach beyond the middle of the

elytra; first joint stout, strongly punctured and sparsely ciliate; third shorter than the fourth, slightly nodose at the apex; fourth to tenth subequal in length, eleventh longer than the tenth; each joint from the fifth or sixth with a feeble longitudinal channel in front and another behind near the lower border. Prothorax with a broad dark channel or depression along the middle bearing four or five longitudinal ridges; the sides reddish, strongly rugose-punctate, furnished like the head with some longish setæ. Elytra sparsely setose, each with two dorsal carinæ and one lateral, also about eight rows of strong punctures, some of the rows long, some short, the intervals between them slightly raised; none of the rows or carinæ extend to the apex; apical part closely and very finely punctulate. Apex of femora and base of tibiæ blackish; femora with large sparse punctures, the hind pair asperate beneath.

Fig. 23.
Dynamostes audax, Pasc.

This is a very rare species, of which I have seen only three examples, two in the collection of M. René Oberthür and one in the collection of Mr. Fry. In the smaller specimen, from Kurseong in Sikhim, the antennæ extend to the middle of the elytra, while in the larger one, ticketed "India" and probably the type, they do not extend beyond the anterior third of the elytra. The difference is probably sexual.

Length 16–22 mm.

Hab. Sikhim; Manipur.

Genus DISTENIA.

Distenia, *Serville, Encycl. Méth.* x, p. 485 (1825); *id. Ann. Soc. Ent. Fr.* 1835, p. 207; *Lacord. Gen. Coléopt.* ix, p. 227.
Apheles, *Blessig, Hor. Soc. Ent. Ross.* ix, p. 165 (1872).
Sakuntala, *Lameere, C. R. Soc. Ent. Belg.* 1890, p. ccxiii.

Type, *D. columbina*, Serv., a South-American species.

Range. Neotropical, African and Oriental Regions; represented also in North America by one species and in East Siberia and Japan by another.

Head strongly exserted, gradually narrowed behind the eyes, which are rather large, transverse, coarsely facetted and broadly but not deeply emarginate in front; front very short, vertical; clypeus oblique, ante-clypeus membranous: labrum large; mandibles rather short, abruptly incurved towards and with scalpriform edge at the apex; maxillary palpi much longer than the labial, the last joint more or less triangular in form; gula convex in the middle, transversely depressed in front and produced so as to form a distinct mentigerous process. Antennæ much

longer than the body, inserted on the head very close to the base of the mandibles; first joint long, slightly curved, gradually thickened towards the apex; second very short; third to sixth or seventh subequal, the others gradually diminishing in length, each narrow and cylindrical, slightly thickened at the apex, furnished beneath with some long fine hairs that usually lie flat along a narrow channel but sometimes project and form a delicate fringe, especially near the apex of the joint. Prothorax not longer than broad, slightly constricted and transversely grooved near base and apex, acutely tuberculate at the middle of each side. Mesonotum with stridulatory area divided by a median line. Scutellum rounded at apex. Elytra elongate, gradually retracted behind. Legs rather long; femora gradually thickened for about two-thirds of their length from the base, narrowed again towards the apex, the hind pair not reaching to the apex of the elytra; middle tibiæ marked with an oblique notch or groove on the outer face not far from the apex; first joint of hind tarsus longer than the next two united; third joint of tarsus cleft almost to the base; claw-joint long. Front coxæ rounded, with their acetabula open posteriorly; acetabula of middle coxæ very narrowly open to the epimera, sometimes closed; episterna of metathorax narrow, gradually attenuated posteriorly.

57. **Distenia kalidasæ**, *Lameere* (Sakuntala), *C. R. Soc. Ent. Belg.* 1890, p. ccxiv.

Body and legs black, the elytra dark metallic green, rather densely covered with a short greyish-tawny pubescence. Head densely and very finely punctulate, marked on the vertex with a median impressed line which extends forwards to the clypeus, the latter with its front margin raised and arcuate, the ante-clypeus yellow and glossy. Prothorax densely and very finely punctulate, with a few larger punctures scattered here and there; disc with a faint tubercle on each side just in front of the basal transverse groove. Elytra much wider at the base than the base of the prothorax, narrowed backwards from the base, subacuminate at the apex, each ending in a single median spine; disc of each marked with four or five unequal rows of strong well-separated punctures on the basal half, the side with some similar irregularly scattered punctures. In the male the head is relatively much larger than in the female, the antennæ nearly twice as long as the body, the legs stouter, with the

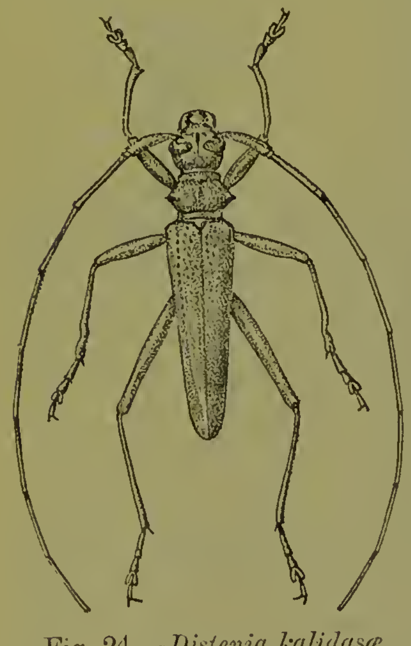


Fig. 24.—*Distenia kalidasæ*, Lameere, ♂.

hind femora reaching nearly to the apex of the elytra and the last ventral segment feebly sinuately emarginate at the apex. In the female the antennæ and legs are shorter and the last ventral segment is sharply rounded at the apex.

Length 23-28; *breadth* 5-6 mm.

Hab. N. India: Allahabad.

58. **Distenia dohertii**, sp. n.

Black, the elytra, antennæ, and legs of a more or less brownish testaceous colour, all covered with a short yellowish-grey pubescence. Ante-clypeus yellow and glossy. Antennæ of female about one-fifth longer than the body. Prothorax with four feeble tubercles on the disc, without punctures excepting the very minute ones from which the pubescence arises. Elytra marked with some dark lines, along which are placed rows of strong and rather widely separated punctures—two rows on the disc of each and two on each side, with a few scattered punctures on the intervals between the rows, a few also near the apex; the punctures in each row are somewhat closer together near the base and become wider apart the farther they are from it; each elytron is emarginate at the apex and armed with a longer sutural and shorter outer spine, and in addition has a dorso-lateral raised line that extends backwards from the humeral depression and disappears a little beyond the middle. Body beneath somewhat ferruginous, the hind borders of the abdominal segments blackish. Legs brownish, the apex of the femora and tibiæ black; femora of the female but slightly thickened, much less so than in the same sex of *D. kalidasæ*.

Length 22; *breadth* 5 mm.

Hab. Manipur (*Doherty*).

59. **Distenia dravidiana**, sp. n.

Head, prothorax and underside of body dark metallic blue, rather thinly covered with grey pubescence; elytra light brown, tinged in places with blue, with a covering of short grey pubescence; legs and first antennal joint reddish yellow, the rest of the antennæ black. Antennæ of male twice as long as the body; first joint rather long, gradually and not strongly thickened towards the apex; third joint about one-sixth longer than the first. Prothorax one-third longer than its width across the base, very minutely punctulate, armed with an acutely pointed tubercle on each side. Elytra strongly and rather densely punctured, the punctures somewhat irregular on the sides, arranged in rows above to the number of seven on each elytron; the rows extend from the base, some to the middle, others to a short distance beyond it; apex of each elytron truncate and bispinose. Legs long; femora subcylindrical, the hind pair extending to the apex of the elytra.

In the length of the prothorax, first antennal joint, and hind femora, this species very closely approaches the genus *Typodryas*.

Length 22; *breadth* 4½ mm.

Hab. Nilgiri Hills (*H. L. Andrewes*).

Genus TYPODRYAS.

Typodryas, *Thoms. Syst. Ceramb.* p. 227 (1864); *Lacord. Gen. Coléopt.* ix, p. 228 (1869).

Psalanta, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 658 (1869).

Type, *T. callichromoides*, Thoms.

Range. Assam, Malay Peninsula, Java, and Borneo.

The species of this genus have a characteristic metallic-blue or green colour, but differ only very slightly in structure from those of *Distenia*. The prothorax is one-third longer than broad, and is transversely striated near the base and apex and to a less degree near the sides; the femora are longer, more slender and cylindrical than in *Distenia*, the hind pair of the male reaching a little beyond the apex of the elytra in most of the species.

60. **Typodryas callichromoides**, *Thoms. Syst. Ceramb.* p. 227 (1864).

Of a metallic-green or blue colour, the elytra with a sutural band of a different tint—usually violaceous or blue. Head transversely rugulose above behind the eyes, impressed on the vertex with a median line. Antennæ twice as long as the body in the male, less than twice as long in the female, the long hairs with which they are furnished beneath sometimes to be seen freely projecting, especially in the female. Prothorax rather strongly constricted and broadly grooved near the apex, marked with a sinuate groove near the base, finely striated transversely in front of the anterior groove and behind the posterior groove, the disc slightly depressed in the middle, feebly raised and transversely wrinkled towards the sides. Elytra cut away obliquely at the apex, each being more prolonged and rather strongly spined at the outer angle and feebly dentate at the suture; each has two raised dorsal lines not extending to the apex, the outer line more distinct, marked with two rows of strong closely placed punctures between the two lines, two rows between the inner line and the suture and another row external to the outer line; the side in its anterior half is densely and less

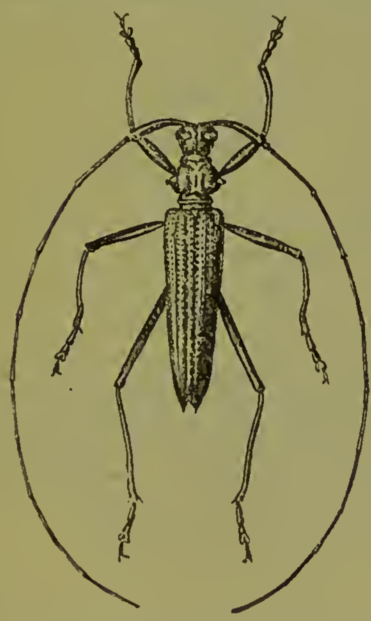


Fig. 25.—*Typodryas callichromoides*, Thoms., ♂.

regularly punctured; the rows of punctures of unequal length, some extending a little beyond the middle of the elytra, others not reaching to the middle. The hind femora extend a little past the apex of the elytra in the male, but do not quite reach to the apex in the female. Apex of last ventral segment subtruncate in the male, rounded in the female.

Length 20–26; *breadth* 4–5 mm.

Hab. Assam: Sylhet and Sudiya.

61. **Typodryas trochanterius**, sp. n.

Metallic green, subnitid, with a steel-blue sutural band on the elytra; legs and base of antennæ dark blue, the rest of the antennæ of a darker violaceous tint. Closely resembling *T. callichromoides*, Thoms., in colour, this species is smaller in size; with the elytra less oblique at the apex, the sutural tooth more distinct and the dorsal lines more faintly raised; the prothorax less deeply constricted and grooved near the apex, the disc very faintly depressed in the middle and less strongly wrinkled towards the sides so that the median area is not distinctly marked off from the lateral parts; the hind femora shorter, not reaching quite to the apex of the elytra in the male; this sex differs also from the same sex of *callichromoides* in the trochanters of the front legs, which are each armed with a short spine at the apex. The female is without these spines and has the last ventral segment rounded at the apex instead of subtruncate; the sexual difference in the length of the antennæ and hind legs is very slight.

Length 14–20; *breadth* $2\frac{1}{2}$–4 mm.

Hab. Assam: Patkai Mts. and Assam Valley (*Doherty*).

Genus MELEGENA.

Melegena, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 659 (1869).

Type, *M. pubipennis*, Pasc., a species from Borneo.

Range. India, Cochin China, and Borneo.

Agrees in form and most points of structure with *Distenia*, Serv., but differs as follows:—femora strongly thickened so as to form a more or less distinct fusiform club, the hind femora similar in form to the anterior ones, but slightly longer; first joint of the hind tarsus not so long as the second and third united.

62. **Melegena flavipes**, sp. n.

Blackish brown; the legs, the first joint of the antennæ, the whole of the front of the head and the palpi pale yellow; the abdomen ferruginous; the elytra faintly covered with greyish pubescence. Head gradually narrowed from the eyes to the occiput, finely and closely but somewhat unevenly punctulate. Prothorax finely and very densely punctulate. Elytra rounded and unarmed at the apex, rather densely punctured except

on the apical third, the punctures more densely but somewhat irregularly placed on the inner part of the disc, forming two rows on the outer part of the disc, also subseriately arranged on the sides, with scattered punctures between the rows. In the male the antennæ are nearly twice as long as the body, the hind femora do not extend beyond the fourth abdominal segment and the last ventral segment is truncate at the apex. Female unknown.

Length 11½; *breadth* 2½ mm.

Hab. Bombay.

Genus NERICONIA.

Nericonia, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 657 (1869).

Type, *N. trifasciata*, Pasc., a species found in Borneo.

Range. Burma, Malay Peninsula and Borneo.

Eyes rather finely facetted. Antennæ longer than the body by from one-third to half their length; the third joint equal to the first or fourth or slightly shorter. Prothorax armed with a strong but somewhat blunt tubercle on each side, constricted and transversely grooved near the apex, marked also with a less distinct transverse groove near the base. Elytra narrowly rounded and unarmed at the apex; marked above, except near the apex, with rows of strong punctures. Legs moderately long; the femora pedunculate at base, more or less abruptly clubbed near the apex, the hind pair not reaching to the apex of the elytra; tarsi rather short; the first joint in the hind tarsi not longer than the second and third united, sometimes much shorter.

63. **Nericonia nigra,** *Gahan, Ann. Mus. Civ. Genov.* xxxiv, p. 30 (1894).

Black, for the most part dull, furnished sparsely with longish suberect setæ; femora yellowish white at the base. Head above, prothorax and first antennal joint minutely and very closely punctured, the punctures on the median part of the pronotum run together in a longitudinal direction and impart to it a slightly rugose appearance. Elytra with strong somewhat transversely elongated punctures arranged in four rows on each, extending from the base to the apical sixth part, the punctures of the innermost row less strong than those of the other three rows; the lines between the rows slightly raised; apical sixth part and the interstices between the large punctures of the anterior five-sixths very minutely and closely punctulate, covered with a very faint blackish-brown pubescence. Legs, except at the base, black, subnitid, sparsely setose. Antennæ (♀ ?) nearly twice as long as the body, covered with very short pubescence, furnished with the usual long, close-lying, hairs beneath; the third joint about equal in length to the fourth.

Length 8 mm.

Hab. Burma: Karen Hills (*Fea*).

Subfamily III. LEPTURINÆ.

Head either gradually or abruptly narrowed posteriorly, with a more or less distinct neck; gula produced between the bases of the maxillæ forms a mentigerous process, which is, as a general rule, very distinct and exceptionally only very short; ligula membranous or coriaceous, usually bilobed or emarginate. Antennæ inserted before or between the eyes, generally at some distance from them, sometimes contiguous to their lower lobes. Prothorax not marginate at the sides. Mesonotum usually with a stridulatory area, which is sometimes absent, but when present it is in most cases divided by a smooth median line or groove. Front coxæ prominent, usually somewhat conical in form, always laterally produced, with their acetabula more or less strongly angulated on the outer side. Acetabula of middle coxæ widely open to the epimera. Episterna of metathorax as a rule rather broad in front, gradually narrowed posteriorly. First ventral segment of the abdomen little or not at all longer than the second. Wing-venation variable; sometimes of the type represented in fig. 5 (Intro.), more often a modification of that type in which the cell has disappeared from the first anal vein.

The *Lepturinæ* can be with little difficulty distinguished from both the *Prioninæ* and *Disteniinæ*, but the differences between the *Lepturinæ* and the *Cerambycinæ* are less strongly marked, at least in the imago; in certain doubtful cases it is not easy to decide to which of the two a genus should be referred. One of the chief reasons for regarding the *Lepturinæ* as a subfamily distinct from the *Cerambycinæ* is to be found in the structure of their larvæ. In these the pleuræ or side-pieces of the head are dehiscent behind the epistoma (or clypeus) and angulated at the end, whereas in the larvæ of *Cerambycinæ* they meet together up to the apex and are separately rounded behind. In the Lepturine larvæ also, the head is less invaginated in the prothorax and the legs are more slender and not so short as they are in the larvæ of other Longicornes. Unfortunately however, as the larvæ of only a relatively small number of the different forms are known, these structural characters can seldom be resorted to in order to decide upon the affinities of a genus.

Synopsis of the Genera.

A. Eyes coarsely facetted.
- a. Winged in both sexes; metathorax normal; eyes usually large and more or less emarginate.
  - a¹. Prothorax tuberculate or spined at the sides; antennæ not contiguous to eyes.
    - a². First antennal joint not reaching to front margin of prothorax.
      - a³. Antennæ serrate, shorter than the body in ♀ .... APATOPHYSIS, p. 69.
      - b³. Antennæ not serrate, longer than the body in ♀ .... PEITHONA, p. 71.

b^2. First antennal joint reaching to front margin of prothorax or beyond.
a^3. Genæ long; first antennal joint reaching beyond front margin of prothorax .... CAPNOLYMMA, p. 73.
b^3. Genæ shorter; first antennal joint not reaching beyond front margin of prothorax .... APIOCEPHALUS, p. 74.
b'. Prothorax not tuberculate at sides; antennæ contiguous to eyes .... CARAPHIA, p. 75.
b. Apterous in both sexes; metathorax very short; eyes small, entire ...... TELEDAPUS, p. 77.
B. Eyes finely facetted.
a. Prothorax tuberculate at the sides .... OXYMIRUS, p. 78.
b. Prothorax not tuberculate at the sides.
a'. Head gradually narrowed behind; eyes entire; elytra with short spine near each shoulder .... RHONDIA, p. 79.
b'. Head abruptly narrowed behind; eyes emarginate; elytra without humeral spine.
a^2. Hind tarsi very long and slender, with first joint longer than remaining joints united.
a^3. Antennæ not broadly dilated, nor strongly serrated .... LEPTURA, p. 81.
b^3. Antennæ broadly dilated, strongly serrated .... EPHIES, p. 87.
b^2. Hind tarsi not very long, first joint shorter than second and third united; elytra dilated behind and rounded at the apex .. PYROCALYMMA, p. 88.

Genus APATOPHYSIS.

Apatophysis, *Chevrolat, Rev. et Mag. de Zool.* 1860, p. 304; *Lacord. Gen. Coléopt.* ix, p. 234 (1869).

Type, *A. toxotoides*, Chevr., a species from Algeria.

Range. North Africa, Turkestan, Persia, Baluchistan, Kashmir, Tibet and China.

♂. Head exserted, narrowed very slightly from behind the eyes; eyes large, transverse, extending on to the ventral surface, coarsely facetted, more or less emarginate in front; front short subvertical; antennal supports slightly raised, the sockets facing outwards; gula produced anteriorly forms a short mentigerous process. Antennæ longer than the body; first joint slightly curved, gradually thickened towards apex, not reaching past the hind border of the eye; third shorter than the fourth, which is shorter than the fifth; fifth to tenth subequal, compressed to a sharp edge in front and angulate at the apex; eleventh longer than the tenth. Prothorax with a more or less acute tubercle on each side and some feebly raised tubercles on the disc. Mesonotum with undivided stridulatory area. Elytra much broader than the prothorax, more than twice as long as their width across the

base, gradually narrowed posteriorly, each sharply rounded at the apex. Legs rather long; femora sublinear, the hind pair not reaching to the apex of the elytra; tarsi long, with joints first to third successively shorter, the third narrowly and not deeply bilobed, the claw-joint long. Front coxæ prominent, transverse; the prosternal process between them very narrow, but dilated behind so as almost to meet the epimera. Episterna of metathorax broad in front, gradually narrowed posteriorly, obtuse at the apex.

♀. Relatively shorter, broader and less pubescent than the male. Antennæ shorter than the body. Elytra shortened so as to leave the last one or two segments of the abdomen uncovered, broadly rounded at the apex. Intercoxal process of first abdominal segment obtusely rounded or subtruncate in front in the type, acutely angulate in other species.

Wings present in both sexes. Venation variable. In the type species the first cubital is bifurcate posteriorly and the second cubital is wanting; in *A. kashmiriana* the first cubital does not bifurcate, the second cubital is present and is joined by a transverse vein with the first cubital and is also joined with the first anal.

64. **Apatophysis kashmiriana**, *Semenow, Revue Russe d'Entom.* i, p. 29 (1901).

Varies from reddish brown to brownish black in the colour of the derm, rather densely covered with yellowish grey or fawn-coloured pubescence. Antennæ of ♂ about one-fourth longer than the body; joints from the third compressed; sixth to tenth acutangulate anteriorly at the apex, fifth rectangulate, fourth obtuse; second and third scarcely as long as the first, distinctly shorter than the fourth; fifth nearly as long as the third and fourth united. Prothorax with a sharp, slightly upturned tubercle on each side and five feeble obtuse tubercles on the disc—two before the middle and three near the base; finely punctulate, with a few sparse granules at the sides behind the lateral tubercles. Elytra somewhat sparsely punctate from the base to the apical third. Third joint of tarsi cleft to the middle, its lobes a little wider than in other species of the genus.

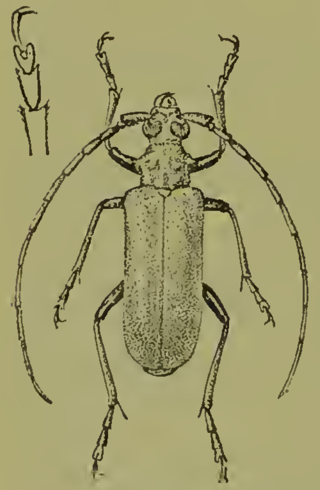


Fig. 26.
Apatophysis kashmiriana, Sem., ♂.

The female is shorter and broader than the male and less pubescent; the antennæ extend very little beyond the middle of the elytra, with the fourth joint scarcely longer than the third, and the fifth but little longer than the fourth; the elytra do not completely cover the abdomen, but leave the greater part of the pygidium

exposed; the intercoxal process of the first abdominal segment is acute and the hind coxæ scarcely more widely separated than they are in the male.

Length 17–23; *breadth* 5–7 mm.

Hab. Kashmir; Punjab; Western Tibet.

65. **Apatophysis montana**, sp. n.

♂. Reddish brown, covered with short greyish pubescence; similar in form to the male of *A. kashmiriana*, Sem., but relatively a little longer and narrower. Antennæ with the second and third joints united not quite so long as the first, and about three-quarters of the length of the fourth joint, which itself is about three-quarters the length of the fifth. Prothorax with a rather obtuse conical tubercle on each side and five very feeble tubercles on the disc. Elytra rather sparsely punctate from the base to a little beyond the middle. Third joint of tarsi not cleft quite to the middle. Wing-venation as in *A. kashmiriana*, Sem.

♀. Unknown.

Length 19; *breadth* 5½ mm.

Hab. Western Himalayas, between Gilgit and Nagy (*W. M. Conway*).

66. **Apatophysis modica**, sp. n.

♂. Similar in colour to the males of the preceding two species; smaller; the eyes more closely approximated on the underside of the head and extending nearer to the genal edge. Antennæ with the first eight joints united a little longer than the body; third joint subequal in length to the first; fourth distinctly longer than the second and third united; the fifth equal in length to the fourth and half of the third. Prothorax with a feeble obtuse tubercle on each side and five on the disc. Elytra punctate, but not very distinctly so, from the base to the apex. Third joint of tarsi cleft not more than about a third of the way to base, its lobes small and narrow. Wing-venation like that of the type species—*A. toxotoides*, Chevr.

♀. Unknown.

Length 13–14; *breadth* 4 mm.

Hab. Baluchistan: Quetta; Persia: Gulistan.

Genus **PEITHONA**, g. n.

Type, *P. prionoides*, sp. n.

Range. Sikhim.

♀. Head gradually narrowed posteriorly; antennæ inserted before the eyes and rather close to the base of the mandibles; eyes coarsely facetted, broadly and not deeply emarginate in front; mentigerous process of gula rather short. Antennæ slightly longer than the body; first joint extending past the eyes by nearly one-third of its length, slightly thickened at the apex; third and

succeeding joints narrow and subcylindrical, not serrate at apex third slightly longer than the first or fourth and shorter than the fifth. Prothorax transverse, a little widened just before the middle, armed there on each side with a sharp spine. Stridulatory area on mesonotum with a shallow groove or depression along the middle. Elytra broad, rather short, rounded at the apex, completely covering the abdomen posteriorly. Front coxæ somewhat transverse; their acetabula strongly angulate on the outer side and closed posteriorly. Legs similar in length and form to those of *Apatophysis*; third tarsal joint cleft beyond the middle. Intercoxal process of abdomen narrow, somewhat sharp in front. Wing-venation differs from that of *Oxymirus* by the absence of a cell from vein A 1.

This genus is closely related to *Apatophysis*, Chev.; it differs chiefly in the form and length of the antennæ and the relative proportions of the first four or five joints, also in the more complete venation of its wings. The type species has a great resemblance in form to some of the *Prioninæ*, and at first sight might be mistaken for a species of that subfamily.

67. **Peithona prionoides**, sp. n.

Fig. 27. *Peithona prionoides*, Gahan

Black; bare of pubescence and dull above, very sparsely pubescent and somewhat nitid on the underside. Head strongly and very thickly punctured, except at the apex of the clypeus, along the channel between the antennal supports and over a slightly depressed area on the vertex, the last of these sparsely punctured, the other two impunctate. Antennæ subnitid; fifth joint at the apex and the succeeding joints for the greater part of their length finely carinate in front, with an elongated poriferous pit on each side of the carina. Prothorax transverse; strongly and very thickly punctured over the middle of the disc, less thickly towards the sides, almost impunctate around the lateral spines. Scutellum broad, rounded behind, finely and rather densely punctate except near its base. Elytra rather strongly punctured, the punctures separated by distinct intervals; each with two smooth dorsal lines. Episterna and lateral borders of metasternum strongly but not thickly punctured; the rest of the metasternum finely and very sparsely punctate; the abdomen almost as finely but less sparsely punctate; the punctures both on the thorax and abdomen carry each a short pale hair. First joint of hind tarsus as long as the second and third united.

Length 23; *breadth* 10 mm.

Hab. Sikhim (*type*, ♀, *in coll. Oberthür*).

Genus CAPNOLYMMA.

Capnolymma, *Pasc. Trans. Ent. Soc.* (2) iv, p. 265 (1858); *Lacord. Gen. Coléopt.* viii, p. 433 (1869).

Type, *C. stygia*, Pasc., a species from Borneo.

Range. Ceylon, Burma, Malacca, and Borneo.

Head prolonged in front to form a muzzle; narrowed gradually behind the eyes into a more or less distinct neck; eyes prominent, coarsely facetted, feebly emarginate in front. Antennæ inserted rather close together on the front at a distance from the eyes; more than half as long again as the body in the ♂; first joint long, slightly curved, thickened at the apex; third joint subequal to the fourth, shorter than the fifth, or any of the succeeding joints. Prothorax with a small conical tubercle at the middle of each side, narrowed strongly in front, somewhat constricted near the apex, narrowed slightly towards the base. Elytra much broader at the base than the base of the prothorax, narrowing backwards from the shoulders, more or less obliquely truncate at the apex. Legs rather long, femora subfusiform in their distal halves; first joint of hind tarsus much longer than the next two joints united. Intercoxal process of the prosternum strongly arched and rather narrow in the middle, steeply sloped posteriorly and slightly dilated at the end, where it comes into contact with the epimera.

68. **Capnolymma cingalensis**, sp. n.

Dark brown; varying to reddish brown on the abdomen, legs, and disc of the elytra; covered rather densely beneath, sparingly above, with dark grey pubescence; prothorax brownish above, marked with some lines of ashy-white pubescence—one median, dividing just before the middle so as to enclose a small lozenge-shaped area, from the lateral angles of which two slightly curved lines run backwards about half-way to the base of the prothorax; scutellum covered densely with white pubescence. Antennæ of ♂ more than half as long again as the body; first joint extending by about one-fourth of its length beyond the hind margin of the head, and inserted on the head at a distance of about one-fourth of its length from the front margin of the eye. Prothorax finely rugulose-punctate. Elytra closely and rather strongly punctured; the apices truncate in a slightly oblique direction, unarmed; the sides nearly black.

Fig. 28.
Capnolymma cingalensis, Gahan, ♂. × $\frac{3}{2}$.

Length 14; *breadth* 5 mm.
Hab. Ceylon.

This species is closely allied to *C. capreola*, Pasc., from Penang, and resembles it very much, but differs as follows: the antennæ inserted at a shorter distance from the eyes, the prothorax very closely punctured instead of granulated.

Genus APIOCEPHALUS.

Apiocephalus, *Gahan, A. M. N. H.* (7) ii, p. 42 (1898).

Type, *A. punctipennis*, Gahan, a species from British East Africa.

Range. East Africa and Northern India.

♂. Head strongly, but somewhat gradually narrowed behind the eyes, with the posterior part forming a distinct neck; eyes large, prominent, coarsely facetted, with a narrow and feeble emargination in front. Antennæ inserted on the front at some distance from the eyes, longer than the body; first joint long, curved, thickened at the apex; third shorter than the first, and scarcely longer than the fourth, fifth longer than the third; sixth to tenth gradually shorter; eleventh scarcely longer than the tenth. Prothorax much narrower in front than at the base, furnished with a sharp conical tubercle at the middle of each side and four tubercles on the disc—two, smaller, in front of the middle, and two, larger, posteriorly. Elytra much broader than the prothorax, narrowed slightly backwards, each truncate at the apex. Legs moderately long; femora fusiform-clavate, the hind pair reaching to the apex of the elytra; tibial spurs short; first joint of hind tarsus as long as the next two united. Acetabula of front coxæ closed in posteriorly by the prolongation of the epimera and thus meet the intercoxal process of the prosternum.

From *Capnolymma* this genus differs as follows: the fore part of the head much shorter, the antennæ inserted farther apart, the prothorax tuberculate on the disc, the elytra less narrowed posteriorly, and the first joint of the hind tarsi not longer than the next two united.

69. **Apiocephalus licheneus**, sp. n.

♂. Blackish-brown, but for the most part covered with a rather dense pubescence. This is whitish in colour on the disc of the prothorax, on the apical fourth of the elytra, on the tips of the femora and of the first antennal joint, also on the sides of the breast and on some spots on the abdomen; elsewhere it is of a greyish tint slightly mixed with tawny, with here and there some small brown spots. Head with the clypeus and neck almost bare of pubescence and somewhat rugosely punctate, the vertex between the eyes furnished with two small tubercles. Prothorax somewhat constricted a little behind the apex, its front margin raised. Elytra strongly and closely punctured on the anterior three-fourths; not visibly punctured on the apical fourth, the white pubescence there being much denser than the mixed pubescence in front; apices

truncate, a projecting patch of pubescence at each of the outer angles gives them the appearance of being somewhat emarginate. Intercoxal process of prosternum feebly tuberculate and almost vertically deflexed behind.

Length 14; *breadth* 5 mm.

Hab. Dehra Dun.

Genus **CARAPHIA**, g. n.

Type, *C. cribrata*, sp. n.

Range. Burma.

Head gradually narrowed behind the eyes, broadly concave between the antennal supports, which are widely separated; front large, oblique, not marked off from the clypeus; the latter produced in front, smooth and membranous near its front border; labrum short, transverse; maxillary palpi a little longer than the labial, last joint fusiform cylindrical; eyes of moderate size, coarsely facetted, emarginate, the lower lobe a little dilated towards both the front and the ventral surface; genæ as long as the lower lobe of the eye; gula produced in a short mentigerous process. Antennæ contiguous to the eyes, a little longer or shorter than the body in the female; first joint subcylindrical, scarcely reaching past the head; third and fourth subequal, each slightly longer than the first, but shorter than the fifth or sixth; seventh to eleventh successively shorter; fourth to eleventh slightly compressed, more or less distinctly canaliculate above and below. Prothorax widest at base, narrowed in front, slightly constricted near base and apex and slightly rounded in the middle at each side. Mesonotum with undivided stridulatory area. Elytra wider at base than base of prothorax, slightly and gradually narrowed for about three-fourths of their length, then more strongly so to the apex, where each is truncate. Legs moderately long; femora sublinear, the hind pair much shorter than the abdomen; tibial spurs short; first joint of hind tarsus as long as the second and third united; third joint deeply cleft, the claw-joint long, the claws not very widely divergent. Front coxæ moderately exserted, angulate outwards, their acetabula closed posteriorly by the approximation of the epimera to the slightly dilated hind end of the rather narrow intercoxal process. Wings with the first cubital vein bifurcate posteriorly, the second cubital joined by an oblique vein with the first cubital, and by another vein with the first anal, the latter sometimes having a narrow elliptical cell in its course.

70. **Caraphia cribrata**, sp. n.

Brownish black. Head sparsely and faintly pubescent, very densely and rather finely punctured all over the upper surface and front, as densely but more coarsely punctured on the underside,

vertex faintly impressed with a median line. Prothorax punctured and pubescent like the head. Scutellum rather short, rounded posteriorly, covered with yellowish-grey pubescence. Elytra slightly depressed near the suture, each with a rather broad shallow channel between the side and the centre of the disc in the middle two-thirds of its length; the surface strongly and very densely punctured all over, the punctures carrying each a small curved seta, those placed along the outer half of the disc have a slight tendency to be arranged in longitudinal rows and are somewhat less crowded together than those near the suture and along the sides; apex of each elytron truncate and slightly oblique, the angles not acute. Underside and legs very densely and more or less finely punctate. Antennæ of the female do not quite reach to the apex of the elytra; fourth and following joints canaliculate, the channels somewhat deeper and more distinct on the last three or four joints. Wings with narrow elliptical cell in course of first anal vein.

Fig. 29.
Caraphia cribrata, Gahan.
× $\frac{5}{3}$.

Length 14; *breadth* $3\frac{1}{2}$ mm.

Hab. Burma: Karen Mts. (*Doherty*).

71. **Caraphia minor**, sp. n.

Very like *C. cribrata*, but smaller and relatively somewhat narrower, with the antennæ longer, those of the female extending by about the last two joints past the apex of the elytra, and with the fifth and sixth joints longer in proportion to the fourth; the channels along the joints scarcely distinguishable except on the last four or five; the punctures of the elytra form definite longitudinal rows, except near the suture and along the lower part of each side, the punctures of alternate rows oblong, carrying each a short, curved, pale tawny seta, the others more quadrate, not setigerous; the dorso-lateral depression on each elytron very faint; the wings without cell in the course of the first anal vein.

The male of this species, if I am right in considering as such the smaller of the only two specimens I have seen, differs but little from the female—the antennæ are a little longer, extending by nearly three joints past the apex of the elytra; the last ventral segment is not shorter than the penultimate, whereas in the male, as well as in the female of *C. cribrata*, it is appreciably shorter.

Length $7\frac{1}{2}$–9; *breadth* 2–$2\frac{1}{4}$ mm.

Hab. Burma: Karen Mts. (*Doherty*).

Genus **TELEDAPUS.**

Teledapus, *Pascoe, A. M. N. H.* (4) viii, p. 268 (1871).

Type, *T. dorcadioides*, Pasc.

Range. That of the type species.

Apterous in both sexes. Head large, strongly exserted, rounded, narrowed near its insertion in the prothorax; eyes small but prominent, entire, rather coarsely facetted; front short, impressed with a median line that extends on to the vertex; clypeus large, membranous in front, labrum transverse; mandibles short, gradually incurved towards the apex; maxillary palpi longer than the labial; last joint of both triangular; gula produced to form a short mentigerous process. Antennæ inserted in front of the eyes, but nearer to the middle line and close to the base of the mandibles; a little longer than the body in the ♂, the first joint not reaching past the eye, the second longer than broad, the third slightly longer than the fourth, shorter than the fifth; sixth to tenth successively shorter. Prothorax longer than broad, slightly rounded at the middle of each side, constricted between the middle and apex and slightly so near the base. Mesonotum without stridulatory area. Elytra rather strongly convex, not much wider than the prothorax, the shoulders oblique, the sides subparallel for about two-thirds of their length, then converging to the somewhat obtusely rounded apex. Legs long, the coxæ very prominent, the femora subcylindrical; the tarsi long and rather narrow, with the first joint much longer and the third much shorter than the second; the third narrowly but completely bilobed; acetabula of the front coxæ angulate on the outer side, very narrowly open posteriorly; prosternum narrow between the coxæ, slightly dilated posteriorly. Metathorax very short, its episterna nearly hidden by the overlapping sides of the elytra.

♀. Broader than the male; the antennæ much shorter, not extending past the middle of the elytra; legs shorter, the hind femora not reaching to the apex of the elytra.

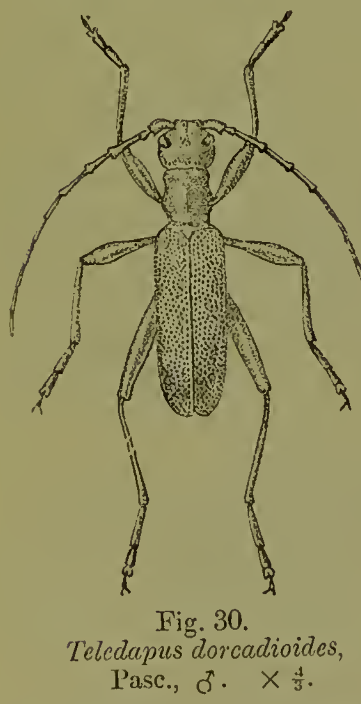


Fig. 30.
Teledapus dorcadioides, Pasc., ♂. × 4/3.

72. **Teledapus dorcadioides**, *Pascoe, A. M. N. H.* (4) viii, p. 269, pl. 13, fig. 1 (1871).

Varies from reddish brown to dark brown in colour. Head finely and very densely punctulate, faintly covered with short grey pubescence; vertex slightly depressed, impressed with a median line which extends along the front to the clypeus; the latter separated from

the front by a sinuate transverse line. Prothorax almost as wide at the apex as at the base, a little protuberant at the middle of each side, broadly constricted between the middle and the apex, marked with a shallow sinuate groove near the base and a median line along the disc; the surface finely and very densely punctulate and faintly pubescent. Scutellum densely covered with greyish tawny pubescence. Elytra densely and strongly punctured all over, the punctures deep and setigerous. Body beneath and legs somewhat more pubescent than on the upper side. Femora gradually and slightly thicker from the base to a little past the middle of their length; the hind pair in the male reach to the apex of the elytra. In the male, first joint of the hind tarsus is longer than the remaining joints united; in the female the first is almost equal in length to the remaining joints united.

Length 14–20; *breadth* 3–4½ mm.

Hab. Western Himalayas; Mussoorie, Jaunsar.

Genus OXYMIRUS.

Oxymirus, *Mulsant, Coléopt. de France, Longicornes,* ed. 2, p. 464 (1862–3); *Lacord. Gen. Coléopt.* viii, p. 443 (1869).

Toxotus (in part.), *Latr. Règne Anim.* ed. 2, v, p. 130 (1829); *Stephens, Illustr. Brit. Ent., Mand.* iv, p. 255 (1831); *Serville, Ann. Soc. Ent. Fr.* iv, p. 211 (1835).

Type, *O. cursor*, Linn.

Range. That of the type species.

Head gradually narrowed posteriorly, somewhat elongated and slightly narrowed in front of the eyes; impressed with a distinct median line that runs from the clypeus to the occiput; clypeus large, limited above by a faint semicircular line, extending in front considerably beyond the base of the mandibles; labrum large; maxillary palpi longer than the labial, last joint of both strongly triangular; gula produced in a very distinct mentigerous process; eyes of moderate size, finely facetted, emarginate. Antennæ inserted in small but rather prominent tubercles placed between the lower lobes of the eyes and at a very short distance from them; a little longer than the body, rather slender; first joint barely reaching past the eye, third longer than the fourth, but distinctly shorter than the fifth; fifth to seventh or eighth subequal, ninth and tenth shorter. Prothorax longer than broad; constricted near base and apex, with a strong tubercle at the middle of each side and two elongate elevations on the disc. Mesonotum with stridulatory area divided by a median line. Scutellum triangular. Elytra much broader at base than base of prothorax, a little prominent at the shoulders, gradually narrowed posteriorly, rounded at the apex, with a short blunt spine on each at the suture. Legs rather long; femora gradually and not strongly thickened, the hind pair do not reach to the apex of the elytra in the male; tibial spurs rather long; first joint of tarsi long, that of the hind tarsi longer than the second and third united; third

joint deeply bilobed. Front coxæ subcontiguous, the intercoxal process very narrow behind; their acetabula open posteriorly. Wings with first cubital vein bifurcate, second cubital joined to the first and to the first anal, the latter with a very distinct and rather large elliptical cell.

73. **Oxymirus cursor**, *Linn.* (Cerambyx) *Syst. Nat.* ed. 10, p. 393 (1758); *Oliv.* (Stenocorus) *Ent.* iv, no. 69, p. 14, pl. 1, fig. 9 (1795).
♂ = Cerambyx noctis, *Linn. Syst. Nat.* ed. 12, p. 630 (1766); *Oliv.* (Stenocorus) *l. c.* p. 17, pl. 1, fig. 10.
♂ = * Toxotus lacordairei,—♀, *Pascoe, Proc. Ent. Soc.* 1867, p. lxxxiv.

♂. Most often nearly black, faintly covered above, more densely beneath, with grey pubescence. Head and prothorax finely and very densely punctate; furnished sparsely with some longish hairs, especially on the sides. Scutellum rather densely pubescent. Elytra rugose, each with an obtuse costa that extends along almost its whole length from the shoulder and two feebler and shorter costæ along the disc, the intervals between the costæ depressed, forming shallow channels. Last ventral segment elongate, narrowed posteriorly, subsinuately truncate at the apex, strongly carinate along the middle.

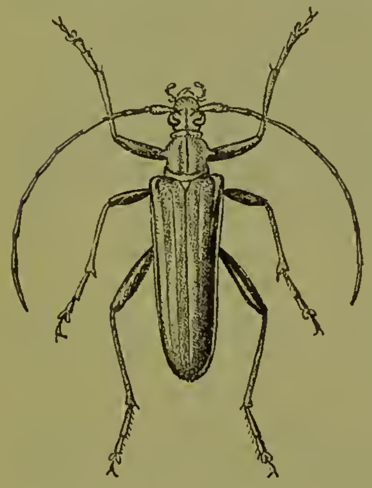


Fig. 31.
Oxymirus cursor, Linn., ♂. × $\frac{3}{2}$.

♀. Exceptionally coloured like the male, but usually differs as follows: a rather broad chestnut-red band along the middle of each elytron and another along the side margin, the two bands uniting at the apex; the legs to a great extent and the antennæ reddish brown; last ventral segment scarcely longer than the penultimate, not carinate along the middle; antennæ shorter than in the male.

Length 15–18; *breadth* 5–6 mm.

Hab. Baluchistan: Quetta; Central and Southern Europe and Western Asia.

Genus **RHONDIA**, g. n.

Type, *R. pugnax*, Dohrn (*Leptura*).

Range. That of the type species.

Head strongly exserted; narrowed gradually and very slightly from the eyes posteriorly until near the occiput and then more

* This name was applied to two specimens, each belonging to a distinct and well-known European species, the one described as the male being a female of *Toxotus meridianus*, Linn., and that described as the female, a male of *Oxymirus cursor*.

strongly narrowed; eyes of moderate size, finely facetted, rounded and entire; front small; clypeus large, limited above by two convergent sutural lines; labrum large; last joint of palpi slightly triangular; gula with distinct mentigerous process. Antennæ inserted in small approximated tubercles, in a line with the lower border of the eyes and at as great a distance from the eyes as from one another; much shorter than the body, with cylindrical joints, the first barely extending past the hind border of the eye, the third and fourth subequal, each shorter than the first or fifth, fifth to tenth subequal. Prothorax slightly longer than its width at the base, strongly constricted and transversely grooved near the apex, laterally and acutely projecting at the apex; marked with a shallow transverse groove near the base. Scutellum rather large, triangular. Elytra much broader than the prothorax, widened a little behind the shoulders, then gradually and slightly narrowed posteriorly; each broadly and subsinuately truncate at the apex, armed with a spine behind the shoulder at the point where the width of the elytra is greatest. Legs long, the hind femora extending by nearly one-fourth of their length past the apex of the elytra; first joint of hind tarsus almost as long as the second and third united; third deeply cleft. Front coxæ almost contiguous, the intercoxal process very narrow; their acetabula widely open posteriorly.

74. **Rhondia pugnax**, *Dohrn.*

Leptura (Capnolymma?) pugnax, *Dohrn, Stett. ent. Zeit.* xxxix, p. 459 (1878).

Straw-yellow, glossy; the antennæ, tibiæ, tarsi, the dorsal borders of the femora, and the posthumeral spines of the elytra black. Head impressed with a fine median line along the vertex and front, the sides finely and sparsely punctate, the vertex with two slight tubercular elevations followed by a median depression near where the short neck begins. Antennæ of female reach to the middle of the elytra. Prothorax smooth and glossy, with a characteristic appearance owing to the deep anterior constriction and groove preceded by the raised and laterally projecting apical border. Elytra finely but not very densely punctate all over, less nitid and a little paler in colour than the prothorax; the spine near each shoulder directed outwards and upwards. Metasternum marked with a deep median groove which ends in front in a small pit just where the triangular lobe which projects between the middle coxæ begins. In the only example of this species

Fig. 32.
Rhondia pugnax, Dohrn. × $\frac{2}{1}$.

which I have seen, the femora are yellow with the upper borders black. The author of the species has, however, described it as testaceous, with the antennæ, legs, and elytral spines black, so that a certain amount of variation in colour must be allowed for. Although referred, but with some doubt, to *Capnolymma*, Pasc., by its author, this species certainly cannot be placed in that genus, the structure of the antennæ and their point of insertion on the head being quite different, and the head itself not nearly so prolonged in front. It is in some respects more nearly related to the Holarctic genus *Gaurotes*, Lec.

Length 11–13; *breadth* 5 mm.

Hab. Northern India; Burma.

Genus **LEPTURA**.

Leptura, *Linn. Syst. Nat.* ed. 10, p. 397 (1758); *Lacord. Gen. Coléopt.* viii, p. 445 (1869).

Type, *L. virens*, Linn., a European species.

Range. Holarctic, extending also, but under somewhat modified forms, into the Oriental Region.

Head abruptly constricted a little behind the eyes, formed into a distinct neck; eyes of moderate size, finely facetted, emarginate; front oblique, either separated or not from the clypeus by oblique sutural lines; the clypeus is relatively long, extends anteriorly considerably beyond the base of the mandibles and becomes coriaceous or membranous only near its front margin; labrum large; genæ more or less long; gula produced to form a distinct mentigerous process. Antennæ inserted between, and close to, the lower lobes of the eyes; generally shorter, sometimes a little longer than the body; the joints more or less slender, usually cylindrical, sometimes slightly angulate at the apex, the fourth shorter than the third or fifth. Prothorax narrowed from the base to the apex, but otherwise somewhat variable in form, the sides sometimes nearly straight, often more or less curved, but never distinctly tuberculate. Elytra generally more or less retracted posteriorly, less often with the sides subparallel. Legs moderately long, the hind pair longest, femora subcylindrical; tibial spurs long; hind tarsi relatively very long, with the first joint longer at least than the next two united and the third not very deeply cleft. Acetabula of front coxæ narrowly open posteriorly, the intercoxal process narrow but more or less dilated towards the end.

75. **Leptura rubriola**, *Bates, P. Z. S.* 1878, p. 720, ♀; *id. Scientific Results Second Yarkand Mission, Coleopt.* p. 22, pl. 1, figs. 21 & 22, ♂ ♀ (1890).

♂. Black, with the elytra from the base to a little beyond the middle yellowish red. Head finely and very closely punctured

and dull, but with the clypeus smooth and glossy, its membranous front edge testaceous. Antennæ nearly as long as the body: first joint slightly curved, thickened towards the apex; third joint scarcely longer than the fourth and a little shorter than the fifth; eleventh about one-third longer than the tenth. Prothorax a little longer than broad, slightly constricted and transversely channelled just behind the front margin, similarly constricted and channelled just before the base; widest at the base, slightly rounded at the middle of each side and narrowed in front; very closely punctured and dull above. Elytra strongly and closely punctured, for the most part dull, slightly glossy near the apex; apices broadly truncate and slightly sinuate, feebly dentate at each of the angles. Hind tarsi very long, the first joint nearly twice as long as the next two united; third joint cleft to the middle, claw-joint long.

Fig. 33.—*Leptura rubriola*, Bates, ♂. × $\frac{2}{1}$.

♀. Prothorax above, except along the front and hind borders, and the whole of the elytra, red. Antennæ not extended beyond the middle of the elytra, with the fourth joint distinctly shorter than the third. Last ventral segment with a shallow groove along the middle; rounded at the apex; pygidium slightly emarginate in the middle at the apex.

♂ *variation*. The elytra entirely black, but otherwise agrees completely in colour and structure with the male type.

Length 11–15; *breadth* $3\frac{1}{2}$–5 mm.

Hab. Kashmir, Murree, near Gulberg, 5000–9000 ft. (*Dr. Aitcheson*), and Lidder, 11000 ft.

76. **Leptura miniacea**, sp. n.

Head, prothorax and elytra reddish brown, covered above with a short dense cinnabar-red pubescence; hind breast, abdomen, antennæ and the posterior two pairs of legs black; front legs reddish brown, varying to piceous towards the dorsal side of the femora. Head constricted a little behind the eyes to form a neck; marked with a median linear groove, which extends from the clypeus to the vertex; gular area flat, scarcely depressed in front, distinctly but not very closely punctate; eyes narrowly and not deeply emarginate in front. Antennæ extend a little past the middle of the elytra, rather thick, clothed with black pubescence; fourth joint slightly shorter than the third and subequal to the fifth; sixth to tenth gradually shorter; fifth to tenth somewhat acutely angulate at the apex in front. Prothorax transversely sulcate close to the apical border; slightly rounded

or subangulate at the middle of each side; the basal angles projecting. Elytra nearly parallel-sided, slightly narrowed posteriorly, each obliquely truncate at the apex. Body beneath and legs sparsely clothed with tawny pubescence. First joint of the middle tarsus as long as the remaining joints united, that of the hind tarsus longer.

Length 13; *breadth* 3½ mm.

Hab. Assam: Naga Hills (*Doherty*).

77. **Leptura lavinia**, sp. n.

Sparsely pubescent; black, the elytra sometimes reddish brown, each of these marked in the female with seven testaceous-yellow spots—two close to the base, one dorsal and the other lateral, two at one-third from the base and united together to form an obliquely transverse fascia constricted in the middle, two, similarly united, placed just behind the middle, the seventh spot placed near the suture between these and the apex but a little nearer to the apex than to the spot in front; these yellow spots, of which but one or two and traces only of the others are shown in the single male specimen seen by me, are covered rather faintly with fulvous pubescence. Head densely and finely punctulate, cheeks and clypeus moderately long, the latter with a transverse sulcate impression, above which a short triangular area, less densely punctulate and more or less nitid, is marked off by two obliquely converging sutural lines. Antennæ of ♂ almost as long as the body, those of ♀ scarcely extend past the middle of the elytra; the joints cylindrical, increasing very slightly in thickness from the fourth to the last, the third slightly longer than the fourth and much shorter than the fifth. Prothorax about equal in length to its width at the base; constricted and marked with a subsinnately transverse groove near the apex; slightly protuberant on each side behind the anterior constriction, then widened towards the base, which has a laterally projecting and acute angle on each side; the basal groove transverse towards the sides and arched forwards in the middle; the disc uneven, with a median sulcate and two lateral broader depressions with raised spaces between, the surface very densely and rather finely punctured. Elytra broader at base than the base of the prothorax, narrowed gradually and slightly until near the apex and then more strongly; truncate a little obliquely at the apex; the surface densely and very finely punctulate. First joint of the hind tarsus a little shorter than the other joints united; the cleft of the third joint does not reach quite to the middle in the hind tarsi, but reaches to the middle in the front and middle tarsi. Last ventral segment of male subtruncate at the apex, faintly depressed in the middle before the apex.

Length 15–22; *breadth* 4–6¼ mm.

Hab. Sikhim (*in coll. Oberthür* and *in Brit. Mus.*).

78. **Leptura clytina**, sp. n.

Elongate. Black; the pronotum rather densely covered with grey pubescence, the elytra faintly pubescent, each marked with four transverse testaceous-yellow bands, the first two (one of which is close to the base, the other at about one-third from the base) united by a longitudinal band of the same colour along the sutural margin, the third band runs a little obliquely from the suture to the outer margin just beyond the middle, the fourth band passes straight from the suture to the outer margin at about one-fourth from the apex; ninth and tenth joints of antennæ yellowish white. Head densely and very finely punctate, with the gula more strongly and less densely punctured; frontal sutures not apparent; the cheeks and clypeus rather long. Antennæ of the ♀ a little longer than the body, the joints cylindrical, gradually but very slightly thicker from the fourth or fifth to the tenth. Prothorax gradually widening posteriorly and projecting a little at the basal angles; the upper surface very densely and rather finely punctate, the punctures only partially hidden by the pubescence. Mesonotum with a very finely striated stridulatory area which is marked by a faint line that divides it longitudinally into two very unequal parts. Elytra broader at base than the prothorax, square at the shoulders, gradually narrowed posteriorly, truncate at the apex; the surface punctate, the punctures smaller and less densely placed on the yellow bands, larger and more densely spread over the intervening black areas. Body beneath rather closely veiled with a short silvery grey pubescence. Abdomen gradually narrowed behind in the ♀, with the last segment extended beyond the apex of the elytra. First joint of the hind tarsus as long as the rest united, the third joint cleft almost to the base.

♂. Not known.

Length 10; *breadth* $2\frac{1}{2}$ mm.

Hab. Burma: Ruby Mines (*Doherty*).

79. **Leptura lepta**, sp. n.

♀. Long and narrow. Head testaceous, the eyes, vertex, neck and a median band in front black; prothorax black, slightly tinged with steel-blue on the disc; scutellum black; elytra testaceous-yellow, with a very narrow band along the suture, another at the outer margin, and six spots on each, black; two of these spots placed near the base, one elongate on the middle of the disc, the other at the side but extended obliquely upwards on to the shoulder; the third spot placed dorso-laterally before the middle, the fourth extended transversely at the middle from the marginal band to the middle of the disc, the fifth dorso-laterally placed between the middle and the apex, the sixth forms an apical spot which joins the marginal and sutural bands. Abdomen, the coxæ in part and the femora reddish testaceous; sterna, tibiæ and tarsi black; antennæ black, the ninth and tenth joints and

the apex of the eighth pale fulvous. Head densely and finely punctate, marked with a transverse impression at the junction of the clypeus with the front, the latter with a feeble median line extending between the antenniferous tubercles to the vertex. Prothorax strongly constricted, with a deep transverse groove near the apex, slightly rounded at the middle of each side, widened towards the base, with the basal angles laterally projecting and acute; the surface glossy, finely but somewhat unevenly punctate, covered with patches of grey pubescence near the base. Elytra sharply rounded at the shoulders, wider there than the base of the prothorax, gradually narrowed posteriorly, truncate a little obliquely at the apex; slightly depressed along the disc near the suture, sparsely and not strongly punctured, the punctures each with a short hair. Breast faintly covered with silky grey pubescence. Abdomen gradually narrowed posteriorly, the last segment shorter than the penultimate, rounded at the apex, projecting a little past the apex of the elytra. Antennæ slightly longer than the body, with cylindrical joints which become successively but very slightly thicker from the fifth to the tenth. First joint of the hind tarsus as long as the rest united, the third cleft nearly to the base.

Length 10–11; *breadth* $2\frac{1}{2}$ mm.

Hab. Burma: Ruby Mines (*Doherty*).

80. **Leptura cribripennis**, sp. n.

Long and narrow. Head and antennæ black; prothorax, elytra, ventral side and legs dark metallic-blue, slightly tinged with green. Head finely and very densely punctured above, less densely on the sides and front; front rather long, with a carina along each side and a deeply impressed line along the middle, this line continued along the vertex; clypeus large, limited above by a transverse impressed line. Prothorax gradually narrowed from base to apex, constricted and deeply grooved transversely near the apex, this groove and the part in front of it smooth and glossy, the rest of the upper surface thickly and rather strongly punctured, except in a transverse groove near the base and along a smooth median line proceeding from it; from the anterior groove a median impressed line extends to the middle. Elytra oblique at the shoulders, narrowed gradually and slightly to the middle, then gradually widened a little posteriorly, truncate broadly and a little obliquely at the apex, slightly more prolonged at the outer angle and there also feebly dentate; the surface very thickly and rather strongly punctured all over. Antennæ of ♂ almost as long as the body; the joints cylindrical, gradually but very slightly thicker from the fourth or fifth; the fifth and succeeding joints each marked with a small pit near the apex on the anterior side. Body beneath not densely covered with short silver-grey pubescence. Abdomen of ♂ narrow, the last two segments extended beyond apex of elytra and curved downwards, the last

segment parallel-sided, a broad deep channel along the middle beneath. Hind tarsi with the first joint longer than the rest united, the third joint cleft less than one-third of the way to the base, that of the front and middle tarsi cleft more than halfway to the base.

Length 13; *breadth* 2½ mm.

Hab. Assam: Patkai Mts. (*Doherty*).

81. **Leptura manipurensis**, sp. n.

Black; elytra nitid, each marked with five yellow spots—two somewhat oblong near the base, one dorsal the other lateral, the third obliquely transverse, reaching from the lateral edge almost to the suture at about one-fourth from the base, the fourth transverse placed just behind the middle also reaching from lateral edge almost to the suture, the fifth close to the suture at about one-fifth from the apex; antennæ of ♀ longer than the body by one joint or so, ninth and tenth joints pale fulvous. Head somewhat elongated in front, the antennal supports approximate, placed near the inner and front margin of the eyes; front with a triangular smooth area in the middle, punctate at the sides; vertex densely punctate; neck densely punctate at sides, less densely above. Prothorax longer than broad, strongly constricted between the middle and apex, transversely rugose above except near the base, where it is densely punctulate. Elytra much broader at base than the base of the prothorax, gradually narrowed posteriorly, truncate at the apex, each with a strong spine at the outer angle and short tooth at suture; surface sparsely and not strongly punctured, the punctures each with a short seta. Body beneath with patches of silky-grey pubescence.

Length 14; *breadth* 3½ mm.

Hab. Manipur (*Doherty*).

82. **Leptura (Strangalia) frainii**, *Fairm. Notes Leyd. Mus.* xviii, p. 239 (1897).

Head and prothorax testaceous red; elytra yellowish testaceous, a transverse black band at the apex; metathorax, first three abdominal segments, tarsi and apices of tibiæ black; rest of the underside and legs testaceous. Head minutely punctulate, very faintly covered with short golden-yellow pubescence. Antennæ inserted between and contiguous to the eyes, filiform, slightly longer than the body in the ♀; first three or four joints testaceous, the rest brownish black. Prothorax nearly as wide at the base as the base of the elytra, the hind angles acute; the upper surface nitid and almost impunctate. Elytra a little dilated posteriorly, attaining their greatest breadth at about one-fourth of their length from the apex, the latter broadly truncate; upper surface subnitid, distinctly and rather densely punctured, the punctures each with a short grey hair. Front coxæ almost contiguous, the intercoxal process very narrow. Tarsi of hind legs

as long as the tibiæ, the first joint longer than the remaining joints united; third joint cleft not quite to the middle.

Variation. Elytra yellow except at extreme apical margin; body beneath entirely testaceous.

Length 10–11; *breadth* 3–3½ mm.

Hab. Sikhim; British Bhutan.

Genus EPHIES.

Ephies, *Pascoe, P. Z. S.* 1866, p. 506; *Lacord. Gen. Coléopt.* viii, p. 453 (1869).

Type, *E. cruentus*, Pasc., a species from Penang.

Range. Himalayas, Burma, Malacca, and Borneo.

Head with a distinct neck; cheeks slightly elongated; palpi subequal and subfiliform. Antennæ inserted in a line with the anterior border of the eyes, strongly serrate; those of the ♂ about three-fourths of the length of the body, those of the ♀ scarcely reach to the middle of the elytra and are much broader than those of the ♂; 4th joint a little shorter than the 5th. Prothorax campanuliform, as wide at the base as the base of the elytra, its hind angles acute; base with a rounded lobe in the middle and a rather deep sinuation towards each side. Elytra rather long, slightly dilated posteriorly, each broadly truncate at the apex and usually toothed at the angles. Legs moderately long; hind femora not reaching beyond the third abdominal segment; hind tarsi almost as long as the tibiæ, the first joint a little longer than the succeeding joints united. Last ventral segment of the ♂ truncate, that of the ♀ rounded at the apex.

83. **Ephies coccineus**, sp. n.

Antennæ, legs and body beneath black; pronotum and elytra red, clothed with a rather dense scarlet pubescence. Head black, the cheeks and base of mandibles sometimes reddish, with patches of reddish pubescence on the vertex, sometimes also on the neck and front. Prothorax sometimes with a short median black line near the base, all the rest of the upper surface, and the sides to some extent, scarlet. Scutellum black. Elytra entirely scarlet; gradually widened from the middle to about the beginning of the apical fourth, and thence slightly narrowed towards the apex, where each is broadly truncate in a slightly oblique direction, with a short tooth at the outer angle and sometimes a feebler one at the sutural angle.

Fig. 34. *Ephies coccineus*, Gahan, ♂.

♂. Antennæ reach almost to the apical fourth of the elytra. Last ventral segment slightly depressed in the middle,

feebly sinuate at the apex, with a rather sharp angle at each side.

♀. Antennæ not quite reaching to the middle of the elytra, wider than those of the male, the fifth joint the widest, the rest gradually narrower.

Length 14–17; *breadth* 3–4 mm.

Hab. Bhutan; Khasi Hills; Upper Burma; Tenasserim.

84. **Ephies sulcipennis**, *Bates, Entomologist*, xxiv, *Suppl.* p. 22 (1891).

"Very near the Sumatran *E. dilaticornis*, but the elytra in the same sex (female) narrow, with straight sides, except near the apex, where they are very slightly dilated. Body beneath and legs brilliant steel-blue. Thorax and elytra red, the latter black at the apex for about one-sixth the length; head and antennæ strongly depressed, basal margin of the thorax and the scutellum black. Antennæ not reaching the middle of the body, joints 3 to 9 broad, dilated on their inner sides and serrated; elytra each with three well-marked longitudinal furrows, the interstices between the 1st and 2nd and 2nd and 3rd convex. Coxæ and underside of anterior femora with fine silky-grey pubescence."

Length 16 mm.

Hab. N.W. India: Kulu (*Capt. Graham Young*).

Genus PYROCALYMMA.

Pyrocalymma, *Thoms. Syst. Ceramb.* p. 159 (1864); *Lacord. Gen. Coléopt.* viii, p. 516 (1869).

Type, *P. pyrochroides*, Thoms.

Range. Northern India and Burma.

Head abruptly narrowed a little behind the eyes, thus forming a distinct neck; front short, with a median groove extending from the clypeus between the antennal supports; eyes of moderate size, finely facetted, emarginate, placed at a slight distance from the antennæ; mentigerous process of gula distinct and moderately long. Antennæ reach to about the middle of the elytra in the ♀, and to the apical third or fourth in the ♂; first joint obconical, slightly curved, equal in length to the third; third and succeeding joints to the eighth or tenth dilated, more or less flattened and triangular in form. Prothorax narrowed from base to apex, but a little rounded in the middle at each side; bisinuate at the basal margin, with the lateral angles slightly projecting. Elytra widened gradually from the base for about three-fourths of their length, then narrowed to the apex, which is round; each with four feebly raised longitudinal costæ. Legs moderately long: femora very slightly thickened towards the distal third; first tarsal joint a little longer than the second in the front and middle tarsi, nearly as long as the second and third in the hind tarsi, claw-joint equal in length to the second and third united. Intercoxale of

prosternum narrow, very slightly dilated posteriorly; the coxæ prominent, closely approximated to each other, the acetabula angulate outwards and open posteriorly. Acetabula of middle coxæ open widely to the epimera. Metathoracic episterna narrowed posteriorly and pointed at the end. Stridulating area of mesonotum divided by a faint median groove.

85. **Pyrocalymma pyrochroides**, *Thoms. Syst. Ceramb.* p. 160 (1864).

Head on top, pronotum, and elytra red, rather densely covered with a somewhat velvety pubescence of a bright red colour; body beneath, legs and antennæ black; head more or less black in front, at the sides and beneath. Antennæ reach to the posterior third of the elytra in the ♂, barely to the middle in the ♀, densely covered with short black pubescence; the joints from the third to the tenth flattened and triangular, projecting strongly at the apex on the anterior side, subequal to one another in length in the ♀, successively and very gradually longer in the ♂, each as broad as it is long or almost so in the ♀, and longer than broad in the ♂. Pronotum, owing to the arrangement of the pubescence, appears to have a broad shallow groove along the middle and a slight depression on each side near the base. Elytra furnished each with four narrow slightly raised longitudinal costæ, the two inner more distinct than the outer. Body beneath and legs minutely and densely punctulate, thinly clothed with blackish pubescence. First joint of hind tarsus narrower than the second or third, nearly as long as these two united.

Fig. 35. *Pyrocalymma pyrochroides*, Thoms., ♀.

Length 16–21; *breadth* (at shoulders) $3\frac{1}{2}$–5 mm.

Hab. Sikhim: Darjeeling, Pedong; Manipur (*Doherty*); Burma Ruby Mines (*Doherty*).

86. **Pyrocalymma conspicua**, sp. n.

Black, the elytra reddish; the vertex of the head, the pronotum and the elytra densely covered with red, silky pubescence. Head with a rather deep transverse line between the clypeus and front, the latter with an impressed line down the middle and a patch of red pubescence on each side; clypeus glabrous, densely punctate; genæ with sparse grey hairs, each marked with a dermal red spot under the eye. Antennæ of ♀ not extended to the middle of the elytra; joints third to eighth dilated towards the apex and tufted with short black hairs, the dilatation very slight on the anterior and stronger on the posterior side; ninth to eleventh subcylindrical. Prothorax gradually narrowed in front, slightly constricted near the base and apex; the disc has the appearance of being sulcate along the middle due to the disposition of the pubescence along each

side of the middle line. Elytra shaped as in *P. pyrochroides* but the dorsal costæ much feebler, two only on each elytron are at all distinct. Femora, especially of the two front pairs, more obviously thickened below the middle than they are in *P. pyrochroides*. Episterna of metathorax glabrous, polished and impunctate on most of the upper half, distinctly and densely punctate on lower half; metasternum subglabrous, nitid, rather thickly punctured near the lateral edges, sparingly over the other parts; abdomen nitid, very sparingly punctulate and pubescent.

Length 13½–15; *breadth* 3–3¼ mm.

Hab. Burma: Ruby Mines (*Doherty*).

Subfamily IV. CERAMBYCINÆ.

Cerambycides, *Lacord.* (in part.) *Gen. Coléopt.* viii, p. 192 (1869).
Cerambycidæ, *Bates* (in part.), *Biol. Centr.-Americana, Col.* v, p. 13 (1879).
Cerambycini, *Ganglb.* (*Bestim.-Tabell. Europ. Col.* vii) *Verh. z.-b. Ges. Wien,* xxxi, p. 687 (1881).

Head variable in form, but seldom distinctly narrowed behind the eyes; mandibles without membranous fringe on inner side; maxillæ bilobed; mentigerous process of gula often wanting, generally very short when present; ligula usually membranous, sometimes corneous. Antennæ inserted as a rule very close to the eyes at some distance from base of mandibles, exceptionally, close to the latter. Prothorax not marginate at sides. Mesonotum generally provided with stridulatory area, which rarely is divided by a median line. Middle tibiæ never notched on outer border. Wing-venation reduced, usually by absence of vein Cu. 2.

As already pointed out, the structural differences in the imago between the beetles of this subfamily and the *Lepturinæ* are not always well-marked, and in cases where the larvæ are unknown there will be a difficulty at times in determining to which subfamily a species belongs. The wing-venation is, as a general rule, much more reduced than in the *Lepturinæ*: the second cubital vein is in the majority of forms absent; when present, it has usually lost all connexion with the first anal vein, appearing then either as an isolated vein or as a branch of the second cubital; the first anal vein, except in one or two genera, has no cell in its course. This subfamily is by far the largest in the present family, and is well represented in most parts of the world. It offers a considerable amount of variety in the structure, form and coloration of the numerous species. In many of the groups the eyes are finely facetted, and where such is the case the habits of the insects are probably diurnal. In these groups the colours are generally brighter and the markings more varied than they are in those with coarsely facetted eyes. Several genera of this subfamily are characterized by the presence of small pits or pores placed close to the suture between the metasternum and its episterna, not far from its posterior apex. These pores, judging from what is

known of their function in the case of a few species, are considered to be the external apertures of scent-glands. But nothing is known as to the nature of the scent in the great majority of the species. In a few, such as the European species *Aromia moschata*, the scent is like that of attar-of-roses.

Synopsis of Groups.

A. Antennæ inserted in front of eyes, very close to base of mandibles; eyes rather finely facetted. Group *Protaxini*.

B. Antennæ more or less distant from base of mandibles.
  a. Eyes, except in *Tetropium*, coarsely facetted.
    a'. Acetabula of middle coxæ open to epimera.
      a^2. Intercoxal process of prosternum very little or not at all dilated at end; acetabula of front coxæ angulated on outer side, open posteriorly; gula usually without mentigerous process.
        a^3. Wing-venation of Lepturine type; antennæ shorter as a rule than body in both sexes, not embraced by the eyes at base .... Group *Asemini*.
        b^3. Wing-venation reduced; antennæ longer than body in ♂, usually embraced by the eyes at base.
          a^4. Ligula corneous .... Group *Œmini*.
          b^4. Ligula membranous .... Group *Hesperophanini*.
      b^2. Intercoxal process of prosternum dilated at end; acetabula of front coxæ closed or almost closed posteriorly, rarely angulated on outer side .... Group *Cerambycini*.
    b'. Acetabula of middle coxæ not open to epimera.
      a^2. Antennæ spined posteriorly at the apex of certain joints .... Group *Phoracanthini*.
      b^2. Antennæ not spined.
        a^3. First abdominal segment of normal length; acetabula of front coxæ open posteriorly .... Group *Callidiopsini*.
        b^3. First abdominal segment very long in both sexes, third much shorter than second in ♀; acetabula of front coxæ closed behind .... Group *Obriini*.
  b. Eyes finely facetted.
    a'. Acetabula of middle coxæ open to epimera.
      a^2. Front coxæ angulated on outer side.
        a^3. Eyes emarginate, antennæ contiguous to them.
          a^4. Front coxæ somewhat conical, rather strongly exserted, their acetabula usually closed posteriorly.... Group *Molorchini*.
          b^4. Front coxæ not conical nor strongly exserted, their acetabula open posteriorly .... Group *Rosaliini*.
        b^3. Eyes entire, antennæ somewhat distant from them .... Group *Mythodini*.

b^2. Front coxæ rounded, not angulated on outer side.
  a^3. Scent-pores showing near postero-lateral angles of metasternum; scutellum generally large and triangular, with apex acute.
    a^4. Acetabula of front coxæ distinctly open posteriorly . . . . Group *Purpuricenini.*
    b^4. Acetabula of front coxæ closed or almost closed posteriorly . . . . Group *Callichromini.*
  b^3. No scent-pores visible; scutellum smaller and less acute at apex.
    a^4. Acetabula of front coxæ closed posteriorly.
      a^5. Legs short, hind femora shorter than abdomen . . . . Group *Pyrestini.*
      b^5. Legs long, hind femora longer than abdomen . . . . Group *Prothemini.*
    b^4. Acetabula of front coxæ open posteriorly.
      a^5. Elytra usually dehiscent posteriorly, attenuated at apex. . . . . Group *Thraniini.*
      b^5. Elytra not dehiscent nor attenuated at apex . . . . Group *Clytini.*

b^1. Acetabula of middle coxæ not open to epimera.
  a^2. Tarsal claws narrowly divergent; eyes often entire . . . . Group *Epipedocerini.*
  b^2. Tarsal claws widely divergent; eyes always emarginate.
    a^3. Eyes not prominent, not extending on to front . . . . Group *Cleomenini.*
    b^3. Eyes prominent, extending on to front. Group *Glaucytini.*

Group *PROTAXINI.*

Head short, rather broad, not narrowed posteriorly; antennæ inserted wide apart and as close to base of mandibles as in the majority of *Prioninæ*; eyes at a short distance behind antennæ, emarginate, rather finely facetted; gula with distinct mentigerous process. Antennæ shorter than body in both sexes. Prothorax rounded at sides, broader in front than at base, almost flat above, lateral edges somewhat sharp but not marginate. Mesonotum with undivided stridulatory area. Tibiæ carinate along each side, spread out at apex. Front coxæ transverse, somewhat prominent, their acetabula open posteriorly. Acetabula of middle coxæ extended to epimera. Wings with veins Cu. 1 bifurcate, Cu. 2 absent.

This group is formed for the reception of a single remarkable genus which cannot well be included in any of the groups established by Lacordaire. In some points of structure, this genus shows an affinity with the *Lepturinæ*, but in the shape of the head and prothorax it resembles no member of that subfamily. From the forward position of the antennæ, it appears to be a primitive form, although in certain other respects it is more specialized than the genera included in the next group.

Genus PROTAXIS, g. n.

Type, *P. fulvescens*, Gahan.

Range. That of the type species.

Head with the front short and broad, sloping gradually from the vertex; the clypeus slightly depressed, marked off from the front by oblique sutural lines, extended anteriorly beyond the base of the mandibles, membranous only at its front edge; labrum transverse; mandibles moderately long, gradually incurved at the apex; gula produced so as to form a distinct mentigerous process; eyes transverse, subfinely facetted, emarginate in front. Antennæ inserted under a slight ridge on each side of the front close to the base of the mandibles and at a short distance in front of the eyes, their condylar foramina facing outwards; reaching to the apical fourth of the elytra in the ♂; first joint rather long, slightly curved, gradually thickened up to the apex and there somewhat abruptly expanded behind in the form of a short blunt process; third joint much shorter than the first and distinctly shorter than the fourth; fifth to tenth subequal, each very slightly longer than the fourth; sixth slightly, seventh to tenth more strongly, angulate anteriorly at the apex. Prothorax transverse, feebly convex or almost flat above, rounded at the sides and somewhat constricted at the base. Mesonotum with undivided stridulatory area. Elytra gradually narrowed backwards from the shoulders, each obtusely pointed at the apex and furnished above with three or four feeble costæ. Legs moderately long; femora rather stout, fusiform-cylindric; tibiæ, especially the hind pair, somewhat expanded at the apex, each carinate along each side close to the ventral face; tarsi rather short and broad, the first joint of the front and middle tarsi scarcely longer than the second, that of the hind tarsus almost as long as the second and third united; third joint completely bilobed; claws not widely divergent. Front coxæ somewhat prominent, their acetabula widely open posteriorly and strongly angulated on the outer side; the inter-coxal process very narrow in the middle and only slightly wider posteriorly.

87. **Protaxis fulvescens**, sp. n.

Head, prothorax, scutellum and elytra fulvous; antennæ, legs and underside, the prothorax excepted, black; the antennæ faintly and the body and legs rather densely covered with grey pubescence. Head densely and rather finely punctured and faintly pubescent. First joint of antennæ densely punctulate, obsoletely carinate in front; eleventh joint very little longer than the tenth, furnished at the end with a short pointed appendix. Prothorax very feebly convex or nearly flat above, obtusely marginate at each side, with a short delicate fringe of grey pubescence projecting from each margin; the flanks also clothed with grey pubescence; the upper surface densely covered

with small granules, almost bare of pubescence, marked with a feeble, slightly sinuate line close to the apical margin. Scutellum obtusely rounded or subtruncate posteriorly. Elytra densely and finely punctured, the punctures to a great extent hidden under a covering of short fulvous pubescence; each elytron furnished above with four feeble costæ, the first of which lies very close to the suture, but diverges a little from it in front and extends along the scutellum. Abdomen narrowed posteriorly; the pygidium projecting a little beyond the last ventral segment in the ♂, and the propygidium notched in the middle at the apex. Hind femora do not reach past the fourth ventral segment. Tibiæ furnished each with a faint carina along the middle of the ventral face and a more distinct carina along each side; spurs of hind tibiæ subterminal. Front tarsi of the ♂ with the first joint broader than the second and the second broader than the third.

Fig. 36.—*Protaxis fulvescens*, Gahan, ♂. × $\frac{5}{2}$.

Length 13–16; *breadth* 4–5$\frac{1}{4}$ mm.

Hab. Manipur (*Doherty*); Naga Hills.

Group *ASEMINI.*

Head short, not broader than the prothorax, the antennal supports depressed; eyes emarginate or divided, not embracing the base of the antennæ; antennæ short, rarely, and then but slightly, exceeding the body in length in the male; gula without mentigerous process; ligula corneous; palpi rather short. Prothorax unarmed at the sides. Front coxæ subglobular, produced in an angle on the outer side, their acetabula open posteriorly; the intercoxal process very narrow, not dilated posteriorly. Acetabula of middle coxæ open to the epimera. Legs of moderate length; the tibial spurs short. Wings with veins Cu. 2 arising from A 1, and joined by a cross-vein to Cu. 2, which is bifurcate towards the end.

Synopsis of Genera.

A. Eyes rather finely facetted, completely divided .... TETROPIUM, p. 95.
B. Eyes coarsely facetted, emarginate .. CRIOCEPHALUS, p. 96.

Genus TETROPIUM.

Tetropium, *Kirby, Fauna Boreali-Americana*, pt. iv, *Ins.* p. 174 (1837); *Lacord. Gen. Coléopt.* viii, p. 208 (1869).
Criomorphus, *Mulsant, Coléopt. de France, Longicornes*, p. 58 (1839).
Isarthron, *Redtenb. Fauna Austriaca*, p. 485 (1849).

Type, *T. castaneum*, Linn., a European species.

Range. Europe; Central and North Asia; North America, Mexico and Guatemala.

Head with the front short, subvertical; the postclypeus triangular, the anteclypeus short, transverse and membranous; mandibles short; maxillary palpi a little longer than the labial, last joint triangular; gula without mentigerous process; eyes rather finely facetted and divided each into two parts which are more or less distant from one another and united only by a smooth raised line destitute of facets. Antennæ inserted before the eyes not far from the base of the mandibles; much shorter than the body, attenuated towards the end; first joint short and thick; the second half as long as the third; third to fifth subequal in length, sixth to tenth gradually diminishing; eleventh shortly appendiculate, longer than tenth. Prothorax transverse, somewhat flattened above, rounded at the sides, broadest a little before the middle and narrowed most towards the base. Elytra feebly convex, not very long, more or less parallel-sided, broadly rounded at the apex. Legs rather short; femora compressed, fusiform, sometimes very shortly pedunculate at the base; first joint of hind tarsus as long as the second and third united. Acetabula of front coxæ strongly angulated on the outer side, the intercoxal process very narrow and for the most of its length forms a thin vertical plate; the intercoxal process of the mesosternum also very narrow, but widened out in front.

88. **Tetropium oreinum**, sp. n.

Black or brownish black, the upperside for the most part dull, the underside and legs somewhat glossy. Head sparsely clothed with tawny setæ; densely rugulose-punctate, marked along the vertex and front with a median groove. Prothorax sparsely setose; widest a little before the middle, narrowed more towards the base than in front, marked with a transverse groove a little in front of the basal margin, the latter not raised; surface finely and very densely granulated, except on two or three small areas in front which are punctate and slightly nitid, and on a small, smooth, median callosity near the base; disc with a slight depression along the middle. Elytra densely punctulate and somewhat glossy near

Fig. 37.—*Tetropium oreinum*, Gahan. ×$\frac{3}{2}$.

the base, the rest of their surface covered with a very short dark pubescence, more or less opaque. Body beneath very sparsely clothed with tawny pubescence. Femora fusiform, laterally compressed.

Length 9–14; *breadth* 2½–3½ mm.

Hab. West Kashmir (*Lt.-Col. Steatham*); N.W. Himalayas (*E. P. Stebbing*).

Genus CRIOCEPHALUS.

Criocephalus, *Mulsant, Col. de France, Longic.* p. 63 (1839); *Lacord. Gen. Coléopt.* viii, p. 210 (1869); *Sharp, Trans. Ent. Soc.* 1905 p. 145.

Megasemum, *Kraatz, Berl. ent. Zeit.* xxiii, p. 97 (1879).

Cephalocrius, *Sharp, tom. cit.* p. 147.

Cephalallus, *Sharp, tom. cit.* p. 147.

Type, *C. rusticus*, Linn., a Palæarctic species.

Range. Holarctic Region; with one species in Upper Burma.

Head with the front sloped, depressed along the middle and marked with a median impressed line extending to the vertex; the clypeus flattened, limited behind by two distinct lines converging so as to form an angle at the middle; anteclypeus short; labrum transverse; gula without mentigerous process, mandibles rather short, each armed with a single tooth near the middle of the inner edge; eyes rather large and coarsely facetted, emarginate in front, the lower lobe extended more or less on to the ventral surface of the head. Antennæ longer or shorter than the body in the ♂, much shorter than the body in the ♀; first joint not extended past the hind margin of the eye; second half as long at least as the first, third much longer than the first and distinctly longer than the fourth. Prothorax slightly transverse, sometimes, especially in the ♂, a little longer than broad, rounded or obtusely subangulate at the sides. Elytra long, feebly convex, slightly narrowed posteriorly, rounded at the apex. Legs moderately long; femora sublinear; tibial spurs short, the front tibiæ with one and the middle and hind tibiæ each with two at the apex; tarsi rather long and narrow, the hind pair with the first joint at least as long as the second and third united. Front coxæ strongly angulated outwards, their acetabula open posteriorly, the intercoxal process very narrow, not dilated posteriorly. Episterna of metathorax moderately broad in front, gradually narrowed to a point posteriorly. Venation of wings resembles that of the genus *Leptura*—*i. e.* the first cubital vein is bifurcated posteriorly and anteriorly is joined by a transverse vein with the second cubital.

89. **Criocephalus exoticus**, *Sharp, Trans. Ent. Soc.* 1905, p. 159.

♂. Pitchy black, with a faint covering of short brownish pubescence. Clypeus with a posterior triangular area a little more

depressed than the rest of its surface; labrum with three tufts of setæ—one median near its front margin, the others near the postero-lateral angles; eyes without long hairs, the upper lobes rather broad, the lower lobes extended to the ventral surface, but widely separated below; gular area between them slightly convex, transversely rugulose and more or less punctate, clothed with long erect hairs. Antennæ reach at the seventh joint a little past the middle of the elytra (the joints succeeding the seventh have been lost from the type specimen); first joint not attaining to the hind margin of the eye; the second nearly half as long as the first and more than half the length of the third. Prothorax rather sharply rounded at the middle of each side, narrowed towards base and apex, its length not quite equal to its width across the middle; the disc flattened, with a rather deep fovea on each side and an impressed line along the middle, the surface very finely and densely punctulate. Elytra very faintly punctulate, each with two feeble dorsal costæ and a very short lateral one. Prosternum slightly convex and somewhat rugulose in front; its intercoxal process narrow and laminiform. Cleft of the third tarsal joint extends about halfway to the base in the anterior tarsi and one-third of the way in the hind tarsi; first joint of the hind tarsi nearly as long as the remaining joints united.

Fig. 38.
Criocephalus exoticus, Sharp. × $\frac{6}{5}$.

Length 17; *breadth* 5 mm.

Hab. Burma: North Chin Hills.

90. **Criocephalus unicolor**, sp. n.

Ferruginous. Head with the clypeo-frontal sutures very distinct, meeting at a sharp angle in the middle; eyes narrower than in *C. exoticus*, Sharp, the lower lobes reach to the ventral surface but remain widely separated below; the gular area between them convexly swollen, strongly rugose-punctate, and in the ♂ with a slight transversely elliptical depression, which is clothed, but not very densely, with longish hairs; palpi very short, the last joint moderately dilated. Antennæ a little longer than the body in the ♂, reaching to the posterior third of the elytra in the ♀; first joint short but extended to the hind margin of the eye, second about two-thirds the length of the first and one-third the length of the third. Prothorax slightly rounded at the sides, its length in the ♂ a trifle greater than its width across the middle, and in the ♀ a little less; convex above, but with a broad, shallow, median depression followed near the base by a feeble tubercular elevation; the surface densely punctate and sparsely but very distinctly asperate. Elytra densely and rather strongly

punctate, the narrow interstices minutely punctulate; faintly pubescent; each with a short sutural spine at the apex, furnished with two feeble dorsal costæ and a short faint lateral one. Prosternum gradually sloping in front of the coxæ, transversely rugulose, its front margin slightly raised, the intercoxal process very narrow. Tarsi slender, the first joint in the hind tarsus nearly as long as the rest united; the cleft of the third extending to the base.

Length 15–20½; *breadth* 4–5½ mm.

Hab. Assam: North Khasi Hills (*Godwin-Austen*). Japan: Tsu Shima.

This species enters into Sharp's genus *Cephalallus*, and possibly may not be really distinct from *C. oberthuri*, Sharp, the type of that genus, as it apparently differs only in colour, as the latter is described as piceous with the elytra ferruginous. *Cephalallus*, *Cephalocrius* and *Megasemum* are distinguishable by such slight structural characters that I consider them at most as only subgenera of *Criocephalus*.

Group *ŒMINI*.

Head vertical or subvertical in front; the clypeus as a rule very short; gula without mentigerous process; ligula corneous; eyes deeply emarginate, sometimes completely divided; antennæ much longer than the body in the ♂. Prothorax sometimes tuberculate or spined at the sides, but more often unarmed. Elytra generally long. Front coxæ more or less prominent, their acetabula angulated on the outer side and open posteriorly; the intercoxal process narrow and not dilated at the end. Acetabula of the middle coxæ extending to the epimera. Wings with vein Cu 2 absent, and Cu 1 either simple or bifurcated towards the end. Stridulatory area of mesonotum usually large and well developed and, except in one genus, not divided by a median line.

Synopsis of the Genera.

A. Front coxæ contiguous.
- a. Prothorax not wider in middle than at each end; third antennal joint shorter than fourth or any of the succeeding joints .... AMIMES, p. 99.
- b. Prothorax wider in middle than at each end; third antennal joint not shorter than fourth or succeeding joints.
  - *a.* Eyes completely divided; prothorax without lobe at base .... TETRAOMMATUS, p. 100.
  - *b.* Eyes emarginate; prothorax with median lobe at base .... HYPOËSCHRUS, p. 104.

B. Front coxæ distinctly separated by prosternal process.
  a. Prothorax unarmed at sides; mesonotum with undivided stridulatory area.
    a. First antennal joint rounded off at apex; basal margin of prothorax nearly straight.................. ŒMOSPILA, p. 104.
    b. First antennal joint sharply angulate or spined at apex, basal margin of prothorax rounded in middle .... XYSTROCERA, p. 105.
  b. Prothorax with a tubercle, sometimes very small, on each side; stridulatory area of mesonotum divided by a median line .... OPLATOCERA, p. 107.

Genus AMIMES.

Amimes, *Pascoe, Journ. Ent.* i, p. 368 (1862); *Lacord. Gen. Coléopt.* viii, p. 377 (1869).

Type, *A. macilentus*, Pascoe.

Range. Ceylon.

Head narrowed gradually behind the eyes, broader in front than the prothorax; eyes large, coarsely facetted, rather deeply emarginate; front short, impressed with a median line, separated from the clypeus by a nearly transverse impression; antennal supports raised and directed obliquely outwards. Antennæ very long in the ♂, filiform, with the joints from the third gradually increasing in length. Prothorax narrow, scarcely longer than broad, a little constricted near the base and apex, feebly tuberculate on the disc. Elytra united about twice as broad as the prothorax and three times as long as they are broad; rounded at the apex. Front and middle coxæ strongly exserted and prominent; the front coxæ contiguous, the intercoxal process very narrow and extended only halfway between them, their acetabula slightly angulate outwards and open posteriorly; the mesosternum also narrow between the coxæ. Legs rather long; the femora narrow at the base, thickened and subfusiform, especially in the ♂, towards the apex, the hind pair scarcely reach past the third abdominal segment; tarsi narrow, the first joint elongate, as long in the hind tarsus as the remaining joints united.

91. **Amimes macilentus**, *Pascoe* (Psilomerus ?), *Trans. Ent. Soc.* (2) iv, p. 238 (1858); *id.* (Amimes) *Journ. Ent.* i, p. 368, pl. 17, f. 6 (1862).

♂. Of a livid brown colour above; with the outer borders of the elytra and a broad, but short, sutural band, that begins a little behind the base and narrows posteriorly, pale yellow. Head partly brown and partly testaceous in front, impressed with a median line that extends from the clypeal suture to the occiput. Antennæ nearly three times the length of the body; yellowish testaceous,

with the first joint brown. Prothorax with four very small bercles on the disc, two before and two behind, the latter more widely separated; marked with a median impressed line; covered faintly with a very short greyish pubescence. Elytra faintly pubescent, subnitid, distinctly and rather closely punctured; narrowed gradually from the base to within a short distance of the apex, then slightly dilated; each sharply rounded at the apex. Body beneath brown, with a faint covering of silvery-grey pubescence. Legs brownish, the peduncles of the femora and the base of the tibiæ pale testaceous.

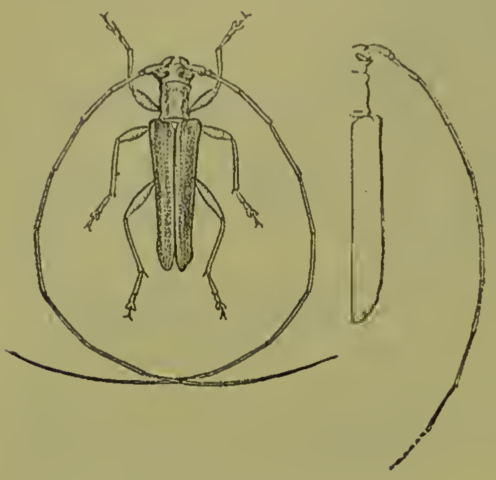


Fig. 39.—*Amimes macilentus*, Pasc., ♂ ♀. × $\frac{3}{1}$.

♀. Antennæ less than twice the length of the body, entirely testaceous red; almost the whole of the head and a broad median band along the pronotum testaceous; the pale sutural band of the elytra extending almost to the apex; the legs entirely testaceous.

Length 10–12; *breadth* 2½ mm.

Hab. Ceylon.

The difference in colour that marks the female specimen here described is probably not altogether sexual, but due in part to individual variation. In the male specimens seen, there is an evident tendency to variation in the extent of the darker brown colour.

Genus TETRAOMMATUS.

Tetraommatus, *Perroud, Ann. Soc. Linn. Lyon* (2) ii, p. 390 (1855); *Lacord. Gen. Coléopt.* viii, p. 221 (1869).

Deuteromma, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 98 (1857).

Type, *T. filiformis*, Perroud.

Range. Southern India, Ceylon, Burma, and Malay Archipelago.

Head nearly flat between the antenniferous tubercles, the latter depressed transverse, with the margin entire; eyes divided each into two widely separated parts, the upper much smaller than the lower. Antennæ slender, sparsely setose, nearly twice as long as the body in the ♂. Third and following joints subequal, or very gradually decreasing in length. Prothorax oblong-ovate or sometimes almost cylindrical in form, constricted at the base, armed with a small inconspicuous spine at the middle of each side, which is sometimes absent; somewhat flattened or depressed on the disc. Elytra longer than head and prothorax combined, narrowed posteriorly and rounded at the apex. Intercoxal part of prosternum

very short; front coxæ contiguous, their acetabula angulate outwards and open posteriorly; middle coxæ almost contiguous. Femora rather long, pedunculate and somewhat curved at the base, fusiform and compressed in their distal half. Tarsi long and narrow; the first joint of the middle and hind pairs almost or quite as long as the remaining three united; cleft of the third joint extends less than halfway to the base.

I. *Prothorax unarmed at the sides.*

92. **Tetraommatus filiformis,** *Perroud, Ann. Soc. Linn. Lyon* (2) ii, p. 391 (1855).

Narrow and elongate, slightly compressed dorso-ventrally, very sparsely pubescent; prothorax reddish-brown; elytra brownish to testaceous; antennæ and legs yellow.

♂. Antennæ one-fifth longer than the body; third, fourth, and fifth joints subequal, each nearly twice as long as the first; sixth to eleventh successively shorter; second twice as long as broad. Prothorax almost twice as long as broad, subcylindrical, slightly widened between the middle and the base, abruptly but not deeply constricted at the base; upper surface finely and very closely punctulate and dull, but with a narrow, subnitid, slightly depressed, transversely striated band corresponding to the lateral constriction at the base; from the clearly defined front edge of this band three faint smooth lines —one median and two lateral—run forward along the disc, and beyond the lateral lines, nearer to the front margin, are two small narrow smooth spaces. Elytra about $2\frac{1}{2}$ times as long as the prothorax, closely and rather strongly punctured, separately rounded at the apex. Femora pedunculate at the base, fusiform and laterlly compressed towards the apex.

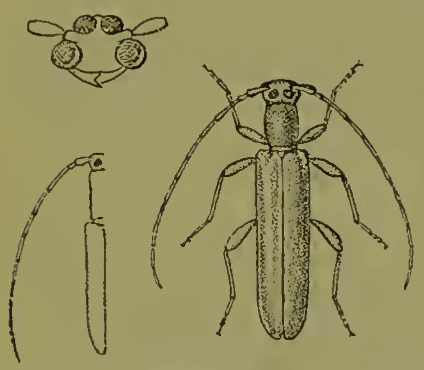


Fig. 40.—*Tetraommatus filiformis*, Perroud. × $\frac{8}{1}$.

♀. Antennæ scarcely longer than the body; prothorax only one-third longer than broad, finely and not very closely granulate above, subnitid between the granules; elytra more than three times as long as the prothorax.

Length 5–10; *breadth* 1–$1\frac{3}{4}$ mm.

Hab. S. India: Pondicherry; Ceylon.

93. **Tetraommatus muticus,** *Pascoe* (Deuteromma), *Trans. Ent. Soc.* (2) v, p. 25 (1858).

Head, prothorax and underside testaceous red; antennæ and elytra testaceous yellow, the latter a little paler at the shoulders

and along each side beyond the middle; legs pale yellow. Head densely rugulose punctate in front, rather sparsely punctulate on the vertex. Antennæ about one-third longer than the body in the ♂, slightly longer than the body in the ♀; sparsely setose; the second joint half as long as the first; third, fourth, and fifth subequal to each other in length. Prothorax of ♂ about twice as long as its width across the middle, subcylindrical, the sides diverge gradually and but very slightly from the apex to within one-third from the base, then converge to the narrow basal constriction; the upper surface slightly convex, densely and very finely punctulate and rather opaque; faintly covered with short tawny pubescence. Prothorax of ♀ about one-fourth longer than broad. Elytra parallel-sided, rounded and unarmed at the apex, feebly convex above, finely and rather densely punctate, and very sparsely clothed with pale tawny pubescence; in the ♂ they are about three times as long as the prothorax, in the ♀ more than three times.

Length, ♂ ♀, 7–8; *breadth* $1\frac{1}{4}$–2 mm.

Hab. Ceylon (♂ *type in B.M.*; ♀ *in coll. G. Lewis*).

This species resembles *T. filiformis*, but is not quite so narrow; the prothorax is without lines above and the narrow band at base is punctulate and not shiny as in that species.

94. **Tetraommatus bimaculatus**, sp. n.

Dark brown, with a very sparse tawny pubescence; elytra marked each with a narrow transverse yellow spot that proceeds from the outer margin a little beyond the middle. Antennæ dark brown, sparsely ciliate; third joint twice as long as the first; second not quite twice as long as it is broad. Prothorax of the ♂ more than one-third longer than broad, slightly rounded at the sides, widest a little behind the middle, constricted at the base; upper surface finely and very closely punctulate and dull, with a narrow transverse basal band, smooth, glossy and somewhat reddish in colour; three smooth lines (the median one slightly depressed and the lateral ones feebly raised) run from the basal band along the disc; prothorax of the ♀ shorter, rather sparsely and irregularly granulate above. Elytra three times as long as the prothorax in the ♂ and relatively longer in the ♀; closely and distinctly punctured, separately rounded at the apex. Body beneath and legs dark brown.

Length 12–13; *breadth* $2\frac{1}{2}$ mm.

Hab. S. India: Madura (*H. E. Andrewes*).

II. *Prothorax with a small spine at the middle of each side.*

95. **Tetraommatus insignis**, *Gahan, Ann. Mus. Civ. Genov.* xxxiv, p. 8, pl. i, fig. 1 (1894).

Head and prothorax of a rusty red or brownish colour; the basal and apical transverse grooves of the prothorax and three

longitudinal impressions on the disc, one anterior and two posterior, dark brown; elytra yellowish testaceous, with two bands and the sutural border between them dark brown; the first band arises from the suture at about the middle of its length, curves outwards and backwards and ends in a transverse spot at the side; the second band begins at the suture at about one-third from the apex and is directed obliquely towards the side but does not reach to the outer margin. Head rather densely punctate and opaque. Antennæ sparsely ciliate, ferruginous at the base, paler towards the end; second joint about one-third of the length of the third; third slightly longer than the fourth and subequal to the fifth. Prothorax of ♂ about one-third longer than its width across the middle; slightly rounded and armed with a small spine at the middle of each side, constricted at base, and marked there with a rather deep transverse groove, which is slightly arched forwards in the middle and has two longitudinal impressions that run from it to the middle of the disc; the upper surface more or less opaque and somewhat densely punctate, the puncturation finer and closer towards the sides. Elytra subnitid, densely punctate, and sparsely pubescent, rounded at the apex. Body beneath reddish testaceous, the abdomen paler; prosternum nitid, transversely striated near its front margin, distinctly but not very densely punctured posteriorly.

Length 8–11; *breadth* $1\frac{3}{4}$–2 mm.

Hab. Andaman Is.; Tenasserim: Thagata (*Fea*); Siam (*Mouhot*).

96. **Tetraommatus nigriceps**, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 502 (1869).

Tetraommatus callidioides (*Pascoe*), var., *Gahan, Ann. Mus. Civ. Genov.* xxxiv, p. 8 (1894).

Brownish black, the prothorax and ventral side of the head testaceous red, the abdomen and legs varying from reddish brown to very dark brown. Head rather densely punctulate. Antennæ twice as long as the body in the ♂; second joint less than half as long as the third; third and following joints to ninth or tenth subequal in length. Prothorax somewhat rounded, and armed with a small spine at each side, constricted and marked with a transverse groove at the base; its length about one-fourth greater than its width across the middle; upper surface very feebly convex, slightly nitid, densely and finely punctate; the sides minutely punctulate and opaque. Elytra densely punctate; sparsely covered with greyish pubescence.

Length $6\frac{1}{2}$–11; *breadth* $1\frac{1}{2}$–$2\frac{1}{2}$ mm.

Hab. Upper Burma: Mt. Hathalin (*Fea*); Perak (*Doherty*); Singapore.

This species differs only in the colour of the head, base of elytra, and front femora from the Bornean species *T. callidioides*, Pasc., and it is probably only a local variety or race of the latter.

Genus HYPOËSCHRUS.

Hypoëschrus, *Thomson, Syst. Ceramb.* p. 249 (1864); *Lacord. Gen. Coléopt.* viii, p. 218 (1869).

Type, *H. strigosus*, Gyllenhal.

Range. Senegal, Abyssinia and India.

Head impressed with a median line; front short, slightly concave between the antenniferous tubercles; the latter transverse, not prominent and not emarginate in front; eyes coarsely facetted, deeply emarginate, with large lower lobe reaching almost to the base of the mandible. Antennæ much longer than the body in the male, not longer than it in the female; third joint the longest, fourth to eleventh gradually shorter. Prothorax nearly as broad as long, more or less rounded at the sides, flattened or slightly depressed along the middle of the disc, with a median obtusely rounded lobe at the base. Elytra costate, a little broader than the prothorax and more than three times as long; each somewhat acuminate at the apex and armed with a short spine. Front coxæ contiguous, the intercoxale of the prosternum very short and narrow; their acetabula angulate outwards and open posteriorly. Intercoxale of mesosternum also very narrow. Femora laterally compressed, fusiform; tarsi long and narrow; first joint of hind tarsus as long as the remaining joints united.

97. **Hypoëschrus indicus**, sp. n.

Fig. 41. *Hypoëschrus indicus*, Gahan, ♂. × $\frac{3}{2}$.

Light brown in colour. Head and prothorax very finely granulate and dull. Antennæ sparsely fringed with pale setæ beneath. Elytra somewhat glossy, very closely punctured; each with seven raised lines, the first running very close to the sutural edge posteriorly but diverges slightly from it in front, the third and fifth somewhat more strongly raised, connected with one another and with the seventh by means of oblique cross-lines posteriorly; the sixth and seventh obsolete in front, and the sixth obsolete also posteriorly.

Length 12–20; *breadth* 3–4½ mm.

Hab. India: Karachi; Calcutta; Belgaum.

This species is indicated as a sal-tree borer on the labels attached to specimens received from the Indian Museum, Calcutta.

Genus ŒMOSPILA, g. n.

Type, *Œ. maculipennis*, Gahan.

Range. That of the type species.

Head with the antennal supports depressed; the front short and transverse, marked off from the clypeus by an arcuately

transverse groove; eyes deeply emarginate, with narrow upper and broad lower lobe. Antennæ about one-third longer than the body in the ♀ and still longer in the ♂; first joint stout, extended a little past the front margin of the prothorax, rounded at the apex; third nearly twice as long as the first; third to fifth subequal in length, slightly flattened above in the ♂; sixth to tenth successively shorter and narrower, eleventh a little longer than the tenth, none of the joints angulated at the apex. Prothorax slightly transverse, rounded at the sides, narrowed a little more towards the base than in front. Elytra long, nearly parallel-sided, narrowed and slightly subtruncate at the apex. Legs moderately long, the posterior two pairs subequal in length, the front pair shorter; femora elongate-fusiform, not pedunculate, slightly compressed; first joint of middle and hind tarsi longer than the second and third united. Front coxæ globular, prominent, with their acetabula produced in a short angle on the outer side; the intercoxal process narrow but completely separating the coxæ; intercoxale of mesosternum moderately broad, gradually narrowed posteriorly and broadly canaliculate along the middle.

98. **Œmospila maculipennis**, sp. n.

Dark brown, densely covered above with greyish tawny pubescence, but with a number of nude, dark brown, subnitid spots on the elytra, these spots irregular in form and not arranged in any definite order; body beneath, legs and antennæ densely covered with greyish pubescence. Prothorax of ♂ relatively larger than in the ♀, widest a little behind the middle, the disc with a very short median carina near the front margin and a short oblique carina on each side on the posterior half; prothorax of ♀ widest at the middle, or a little before the middle, not carinate above on each side, but with traces of a slight median carina. Elytra rather thickly punctured, the punctures appearing larger and more densely placed on the glabrous dark brown spots.

Length 20–25; *breadth* 5–5¾ mm.

Hab. Assam: Sibsagar (*Indian Museum*); Brit. Bhutan (♂ ♀ *in coll. Oberthür*).

Genus **XYSTROCERA**.

Xystrocera, *Serv. Ann. Soc. Ent. Fr.* 1834, p. 69; *Lacord. Gen. Coléopt.* viii, p. 229 (1869).

Type, *X. globosa*, Oliv.

Range. Ethiopian, Oriental, and Australian Regions.

Head vertical in front, raised so as to form a ridge, broadly concave from side to side, between the antennæ; antennal supports emarginate in front, acutely pointed on the inner side; postclypeus very short, separated from the front by a transverse groove; anteclypeus membranous; eyes large, deeply emarginate,

the lower lobes extended close to the mandibular edge of the genæ; mandibles oblique, straight at base, turned in at right angles at the apex. Antennæ of ♂ about one-third to twice longer than the body; first joint stout, asperate, its apex with sharp upper edge and acutely produced anterior angle or spine; third to fifth thickened, asperate, the third shorter than the fourth or fifth; sixth to tenth subequal, each much shorter than the fifth; antennæ of ♀ a little longer than the body, joints third to fifth less thickened and less asperate. Prothorax slightly convex above, rounded at the sides, base with rounded lobe in the middle. Elytra long, more or less narrowed backwards from the base, rounded at the apex. Legs long, the front pair shorter than the others; femora fusiform-clavate, compressed, pedunculate at base; tibiæ compressed. Front coxæ separated, their acetabula strongly angulate outwards. Mesosternum moderately broad, narrowed posteriorly and truncate at the end.

The pupæ of one species at least, and probably of all the species, of this genus are enclosed in calcareous cocoons of a texture similar but somewhat longer and narrower in form than those which enclose the pupæ in the genus *Plocederus.*

99. **Xystrocera globosa,** *Oliv.* (Cerambyx) *Entom.* iv, no. 67, p. 27, pl. 12, fig. 81 (1795); *Coquerel, Ann. Soc. Ent. Fr.* 1848, p. 180, pl. 7, iv, fig. 2 *a, b, larva.*

Reddish brown; prothorax with the front and hind borders, a narrow median longitudinal band (sometimes obsolete) and a broader lateral band, which in the ♂ runs obliquely from the side of the thorax in front towards the medio-basal lobe behind, metallic blue or green; elytra testaceous yellow, the outer and apical borders and, on each, a median longitudinal band, which anteriorly is directed obliquely towards the shoulder, also metallic blue or green. Head densely punctate. First joint of antennæ asperate, with spiniform anterior process at the apex; third to fifth strongly asperate, each in the ♂ with the apex thickened and dentate beneath; third joint thicker and about one-fourth shorter than the fourth. Prothorax densely and finely granulated on the disc in the ♂, less densely granulated in the ♀; prosternum of the male with a transversely striated glossy band of metallic colour, close to the front margin, the rest of its surface as well as the lower part of the sides of the prothorax forming a convexly raised, very minutely and densely punctate, area of a dull red colour; the corresponding area in the female more

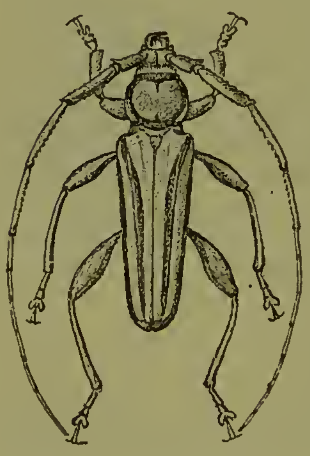


Fig. 42.—*Xystrocera globosa,* Oliv., ♂.

or less concave, sparsely granulated and not extended on to the sides, whence the lateral bands run straight back instead of taking an oblique direction as in the male. Elytra densely and rather strongly punctured; each with three slightly raised longitudinal lines—two dorsal and one lateral.

Length 15–32 mm.

Hab. India: Darjeeling, Bombay, Mysore, Madras; Ceylon; Assam; Burma. Siam, Malay Peninsula. Java, Celebes, Philippines. Egypt; Mauritius; Hawaiian Islands.

100. **Xystrocera festiva**, *Thoms., Essai Classif. Ceramb.* p. 251 (1861); *Pascoe, Trans. Ent. Soc.* (3) iii, p. 506 (1869).

Testaceous red, the antennæ black; the sides of the prothorax metallic green or blue and the upper surface of the same colour except over a large median subcordate spot which is testaceous yellow; the elytra testaceous yellow along the inner or sutural half of each, metallic green or blue along the outer half and around the apex; legs testaceous, the tibiæ dark brown except at the apex, the femoral peduncles dark brown in their distal half. Antennæ nearly twice as long as the body in the ♂, barely longer than the body in the ♀; strongly asperate, and more or less denticulate beneath, in the ♂, less strongly asperate in the ♀; third and fourth joints and the fifth to a less extent dentate beneath at the apex. Disc of prothorax sparsely and subasperately punctate, the prosternum and sides finely and rather densely punctulate; in the ♂, a definite smooth line with a strongly sinuous course forms the boundary between the two differently punctured areas. In the ♀ disc of prothorax finely, subasperately punctate, the sides and prosternum sparsely punctate. Elytra distinctly, but not very densely punctate; each rounded and unarmed at the apex.

Length 30–38; *breadth* 7–9 mm.

Hab. Burma: Karenee (*Fea*). Sumatra; Java; Borneo.

Genus OPLATOCERA.

Oplatocera, *White, Cat. Col. B. M., Longic.* p. 121 (1853); *Lacord. Gen. Coléopt.* viii, p. 231 (1869).

Hoplitocera, *Gemm. & Har.* (as an emendation of the name) *Cat. Col.* p. 2795 (1872).

Type, *O. callidioides*, White.

Range. Sikhim and Bhutan.

Head rather strongly concave between the antennal supports; the latter prominent with their openings facing outwards; eyes moderately large, deeply emarginate in front, slightly sinuate posteriorly; front moderately large, subvertical, not distinctly marked off from the clypeus, anteclypeus rather large, coriaceous near its front border; mandibles straight at base and almost

squarely turned in towards the apex, each with a dorsal ridge along the straight portion; palpi subequal; gula with outmentigerous process. Antennæ longer than the body; first joint stout, thickened towards the apex and reaching almost to the middle of the prothorax; third much longer than the first, fourth to eleventh gradually shorter and more slender. Prothorax transverse, somewhat variable in form, strongly rounded at the sides and feebly tuberculate behind the middle in the ♂ of the type species; a little rounded and strongly tuberculate at the middle of each side, with a sulcate constriction near the base and apex, in the second known species. Elytra broader than the prothorax, more than twice as long as broad, gradually narrowed backwards, the sides more strongly convergent at the apex. Legs moderately long; the femora stout, subfusiform; first joint of hind tarsus not so long as the next two united. Front coxæ transverse, their acetabula open posteriorly; intercoxal process distinct but rather narrow, parallel-sided. Intercoxal process of mesosternum triangular, concavely depressed along the middle. Episterna of metathorax broad in front, gradually narrowed almost to a point posteriorly. Stridulatory area of mesonotum with an impressed line along the middle. First cubital vein of wings bifurcate posteriorly, second cubital wanting.

101. **Oplatocera callidioides,** *White, Cat. Col. B. M., Longic.* p. 121, pl. 3, fig. 7 (1853).

♂. Cinnamon-brown; elytra with dark brown lateral margins, marked each with two black-brown spots placed obliquely between the base and the middle, with another large oblique spot or band a little beyond the middle. Head densely rugulose-punctate. Antennæ extended by about two or three joints past the apex of the elytra; first joint very stout, densely granulate, third to sixth armed posteriorly at irregular intervals with short spines, third nearly twice as long as the first. Prothorax large, transverse, nearly as wide as the elytra, a little depressed above, strongly rounded at the sides but drawn in at the base and furnished behind the middle with a feeble tubercle; the surface densely rugulose-punctate, sparsely covered with rather long pubescence. Shape of the elytra as in the figure of the next species. The intercoxal process of the prosternum is gradually sloped in front.

Length 48 mm.

Hab. Northern India.

102. **Oplatocera oberthuri,** sp. n.

Cinnamon-brown; antennæ tipped with dark brown at the apex of each joint; prothorax with two black-brown spots on the disc and a narrow dark band towards each side; elytra marked each with two oblique black-brown bands that appear to be

made up of a series of elongate spots placed side by side; the oblique apical margin of the elytra blue-black, the lateral margins not dark as in the preceding species. Head rugulose-punctate. Antennæ reach past the apex of the elytra by about three joints in the ♀, and by more than four in the ♂; first joint very densely and very finely rugulose-punctate; third to sixth not spined in either sex; all the joints pubescent, the pubescence longer and somewhat denser on the underside. Prothorax transverse, but much narrower than the elytra, slightly constricted and marked with a transverse groove near base and apex, a little dilated and strongly tuberculate at the middle of each side; the dark spots on the disc placed on two slight elevations, between which is a median canaliculate depression; the surface densely rugulose-punctate, sparsely clothed with longish pubescence. Each elytron with two feebly raised dorsal costæ which unite at about the middle of the posterior dark band, a single costa continued thence almost up to the apical border; the surface very finely rugulose-punctate, covered faintly with short grey pubescence. Tips of the femora and tibiæ and lateral borders of the metasternum, black. Last ventral segment sinuate at the apex in the ♂, broadly truncate and fringed with reddish-brown hairs in the ♀. Intercoxal process of prosternum abruptly declivous in front.

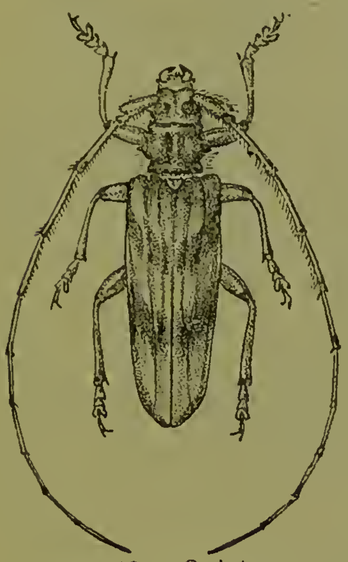


Fig. 43.—*Oplatocera oberthuri*, Gahan, ♂.

Length 30–37; *breadth* 9–11 mm.

Hab. Sikhim: Darjeeling; British Bhutan.

Group *HESPEROPHANINI.*

Gula without mentigerous process, except in *Hesperophanes*, in which it is very short; ligula membranous; eyes large, deeply emarginate; antennæ ciliated, longer than the body in the ♂. Prothorax unarmed at the sides. Elytra rather long, more or less parallel-sided. Front coxæ subglobular, more or less angulate at the side; their acetabula open posteriorly; the intercoxal process either very little or not at all dilated at the end. Acetabula of middle coxæ extended to the epimera. First abdominal sternite not longer than the second except in the middle and at the sides. Wing-venation reduced by the disappearance either of vein Cu 2 or of the posterior branch of Cu 1, probably the latter; Cu 2 in that case having lost its connection with A 1 appears simply as a branch of Cu 1.

Synopsis of the Genera.

A. Head with a deep arcuate impression between clypeus and front; mandibles of ♂ with dorsal crest or carina ...... GNATHOLEA, p. 110.
B. Head not deeply impressed between clypeus and front; mandibles without dorsal crest or carina.
  a. Antennal supports depressed; prosternal process gradually sloped posteriorly and slightly dilated at the end ...... HESPEROPHANES, p. 112.
  b. Antennal supports sharply angulate or spined, especially in the ♂, on the inner side; prosternal process more abruptly sloped posteriorly and narrowed at apex.
    a. Prothorax of ♂ with a large tomentose depression on each side ...... STROMATIUM, p. 114.
    b. Prothorax of ♂ without tomentose depressions on the sides .... ZOODES, p. 115.

Genus GNATHOLEA.

Gnatholea, *Thoms. Essai Class. Ceramb.* p. 375 (1861); *Lacord. Gen. Coléopt.* viii, p. 284 (1869).

Type, *G. eburifera*, Thoms.

Range. Northern India, Burma, Siam, Malay Peninsula, Java, and Philippine Islands.

Head slightly rather broadly concave between the antenniferous tubercles; front short subvertical, separated from the clypeus by a rather deep arcuate groove; eyes deeply emarginate, with narrow upper and large lower lobe; genæ short, strongly angulate and prominent below in the ♂; mandibles strong, subhorizontal or oblique, furnished either with a dorsal carina or crest in the ♂, much shorter, oblique, with very feeble dorsal carina in the ♀; gula without mentigerous process. Antennæ one-third or so longer than the body in the ♂, about equal in length to the body in the ♀; third joint longer than the fourth, fourth to tenth subequal or gradually diminishing in length. Prothorax transverse, somewhat rounded at the sides. Elytra nearly parallel-sided, rounded posteriorly and armed each with a short sutural spine; sometimes truncate and bispinose at the apex. Legs moderately long, slightly compressed; front femora subfusiform, the others sublinear, the hind pair reaching almost to the apex of the elytra in the ♂; first joint of hind tarsus shorter than the second and third united. Intercoxal process of prosternum strongly but not abruptly sloped posteriorly, feebly dilated near the end.

I. *Body rather densely pubescent ; mandibles of ♂ sub-horizontal with strong dorsal crest.*

A. *Elytra marked with ivory-like spots.*

103. **Gnatholea eburifera**, *Thoms. Essai Class. Ceramb.* p. 375 (1861).

Reddish brown to brown in colour, rather densely covered with brownish-grey pubescence, the elytra marked each with two closely approximated ivory-like spots just behind the middle and a similar spot at the base, the inner of the two sub-median spots usually smaller than the outer one. Prothorax rather broad in front and narrowed towards the base in the ♂, almost as narrow at the apex as at the base in the ♀; the disc with two small but distinct tubercles placed transversely just before the middle. Elytra rounded at the apex, a little truncate near the suture and armed each with a sutural spine; the surface rather thickly dotted with rather large but shallow sub-nitid punctures, the front edges of which are slightly raised; each with two very feebly raised and almost obsolete dorsal lines. Antennæ scarcely as long as the body in the ♀; about one-third longer than the body in the ♂.

Length 15–26 ; *breadth* 4–6 mm.

Hab. Tenasserim ; Siam ; Malay Peninsula ; Borneo.

Fig. 44.—*Gnatholea simplex*, Gahan, ♂. × 4/5.

B. *Elytra without ivory-like spots.*

104. **Gnatholea simplex**, *Gahan, A. M. N. H.* (6) v, p. 53 (1890).

Brown, sometimes reddish brown, in colour, rather densely covered with drab-grey pubescence. In structural characters it agrees pretty closely with *G. eburifera*, Thoms., but has the two discal tubercles of the prothorax smaller and less distinct and the asperate punctures of the elytra fewer in number and smaller in size, the anterior part of the disc especially being almost destitute of them.

Length 14–24 ; *breadth* 3¾–6 mm.

Hab. Sikhim : Darjeeling ; Assam ; Burma : Ruby Mines (*Doherty*), Mandalay and Prome (*Fea*), Tharawaddy (*Corbett*).

II. *Body sparsely pubescent ; mandibles of ♂ oblique, with dorsal carina. Elytra marked with ivory-like spots.*

105. **Gnatholea fryana**, sp. n.

Testaceous red, rather dull above ; the elytra marked each with

two contiguous ivory-white spots at the base and two similar spots just past the middle, these spots larger and broader than the corresponding spots in *G. eburifera*, Thoms., but very like those that occur in the Malayan species *G. subnuda*, Lac. Head impressed with a deep arcuate groove between the clypeus and front as in the other species of the genus; the mandibles strong, but oblique as in the ♂ and with only a dorsal carina gradually sloping away in front, instead of the strong, anteriorly projecting crest met with in the other species. Antennæ of the ♂ rather more than one-third longer than the body, furnished sparsely with longish hairs; first joint obconical, not very stout, distinctly but not very thickly punctured and scarcely impressed in front; this and the two or three succeeding joints rather glossy, the others duller. Prothorax minutely and rather sparsely granulate, sparsely pubescent, and without tubercles on the disc. Elytra sub-rugulose punctate, sparsely clothed with short pubescence, with which some longer sub-erect hairs are mixed; each rounded at the apex and armed with a sutural spine.

Length 25; *breadth* 7 mm.

Hab. Tenasserim: Tavoy (*Doherty*).

Genus HESPEROPHANES.

Hesperophanes, *Mulsant, Coléopt. de France, Longicornes,* p. 66 (1839); *Lacord. Gen. Coléopt.* viii, p. 275 (1869).

Type, *H. sericeus,* Fab., a species found in Southern Europe and North Africa.

Range. Mediterranean Subregion; Tenasserim?; and West Africa.

Head feebly raised, slightly concave between the antennæ, the antennal supports not prominent, front subvertical; gula with a very short, broad mentigerous process. Antennæ longer to a greater or less extent than the body in the ♂, shorter than the body in the ♀; first joint gradually thickened to the apex, the others subcylindrical or slightly compressed, eleventh slightly longer than the tenth in the ♂. Prothorax slightly transverse, convex above, rounded at the sides and narrowed more towards the base than in front. Elytra either parallel-sided or nearly so for four-fifths of their length, rounded at the apex. Legs moderately long; the femora gradually thickened from the base for two-thirds or three-fourths of their length, the hind pair not reaching to the apex of the elytra; first joint of the hind tarsi not longer than the next two united. Intercoxal process of prosternum slightly arched, sloping gradually posteriorly, usually a little widened towards the end.

The species of this genus are in general form very like those of *Stromatium*, and are distinguishable from them by the less prominent antennal supports and the form of the intercoxal process of the prosternum. In the males the prothorax is usually larger and more convex than in the females, but it never has the large

piligerous pit on the side which characterizes the males of *Stromatium*.

Many of the species placed under this genus in the Catalogue of Gemminger and Harold do not really belong to it; others are still unknown to me. The exact range of the genus is uncertain; that which I have given above is based upon the distribution of such species as are known to me.

106. **Hesperophanes cribricollis**, *Bates, Proc. Zool. Soc.* 1878, p. 720; *id. Scientific Results of the Second Yarkand Mission*, Coleoptera, p. 21 (1890).

"Cylindricus, fulvus, pubescentia incumbente cinereo-fulva apud elytra maculatim vestitus; thorace rotundato, elytris multo angustiore, inæquali, lateribus medio subtuberoso, supra crebre alveolato-punctato; scutello cinereo; elytris omnino discrete punctatus, haud conspicue bicarinatis, apice gradatim angustatis, subacuminatis."

"Closely allied to the European *H. griseus*, but distinguished by its smaller and more coarsely reticulate-punctate thorax, and by the elytra tapering towards the apex causing the sutural angle to be very acute. The fourth antennal joint is only a little shorter than the third and the fifth. The tawny-grey, laid pubescence is very even on the antennæ, the whole under surface, and the legs."

Length 16½-19 mm.

Hab. Murree.

107. **Hesperophanes erosus**, *Gahan, Ann. Mus. Civ. Genova*, xxxiv, p. 12 (1894).

♀. Reddish brown, somewhat darker in colour on the upperside; the head rather densely covered with greyish-brown pubescence; the prothorax with some irregular longitudinal spots or patches of greyish-brown pubescence, the spaces between obsoletely punctured and opaque; elytra with a closely recumbent pubescence distributed in irregular and partly confluent spots or patches, the naked intervening spaces somewhat glossy. Head marked above with a median line. Antennæ extended a little beyond the middle of the elytra. Prothorax convex above and below, strongly rounded at the sides, marked with a few large but shallow punctures on the antero-median part of the disc. Scutellum grey. Elytra strongly and very densely punctured; rounded at the apex; each with two slightly raised longitudinal lines. Intercoxal process of prosternum somewhat abruptly deflexed posteriorly and slightly narrowed at the end.

This species is provisionally placed in the genus *Hesperophanes*; it may possibly prove, when the male is known, to belong to the genus *Stromatium*.

Length 23 mm.

Hab. Tenasserim: Meetan (*Fea*).

Genus STROMATIUM.

Stromatium, *Serville, Ann. Soc. Ent. Fr.* (1834) p. 80; *Lacord. Gen. Coléopt.* viii, p. 282 (1869).

Type, *S. barbatum*, Fab.

Range. Mediterranean and Malagassy Subregions; the Oriental Region, extending thence through the Eastern Archipelago to Batchian.

Head with a transverse ridge between the antennæ, slightly prominent and acute at each end; clypeus short, transversely depressed; anteclypeus coriaceous; labrum transverse; mandibles short, oblique; gula without mentigerous process; eyes rather deeply emarginate, with large lower lobe, extending anteriorly almost up to the genal edge. Antennæ about one-third longer than the body in the ♂, scarcely longer than the body in the ♀; ciliate beneath; third joint the longest, fourth slightly shorter than the fifth. Prothorax transverse or subquadrate, with the sides more or less strongly rounded or protuberant in the ♀, each marked with a large tomentose depression in the ♂. Elytra nearly parallel-sided, narrowed and rounded at the apex. Legs moderately long; femora compressed, the front pair very broad a little below the base in the ♂, and gradually narrowed outwards; the middle and hind pairs gradually and slightly widened up to the middle; the hind pair do not reach to the apex of the elytra in the ♂; first joint of the hind tarsus not so long as the second and third united. Front coxæ rounded, their acetabula a little angulate towards the side and open posteriorly; intercoxal process gradually deflexed and not dilated towards the end.

108. **Stromatium barbatum**, *Fab.* (Callidium) *Syst. Ent.* p. 189 (1775); *Oliv. Entom.* iv, no. 70, p. 10, pl. 4, fig. 41 (1795).
Callidium funestum, *Boisd. Voy. d'Astrolabe*, ii, p. 481 (1835).

Varies in colour from brownish black to reddish brown, faintly covered with tawny pubescence. Head densely and rather coarsely punctured above and at the sides, as densely but less strongly punctured in front. Prothorax very densely covered with strong coarse punctures; the disc with five slightly raised tubercles, less distinct in the ♂, placed two anteriorly, one behind the middle, and two near the base; the sides broadly and obtusely protuberant except near the base, in the ♀; straighter and marked each with a large tomentose depression, extending along the greater part of its length, in the ♂. Elytra coarsely and very densely punctured; each with two tolerably distinct dorsal and one or two short lateral costæ, the latter sometimes obsolete; a short sutural tooth at apex.

Fig. 45.—*Stromatium barbatum*, Fab., ♂.

Length 12–29; *breadth* 4–7½ mm.

Hab. India; Ceylon; Burma; Andamans. Mauritius; Bourbon; Madagascar.

109. **Stromatium longicorne**, *Newman* (Arhopalus), *Entomologist*, i, p. 246 (1840).
Stromatium asperulum, *White, Cat. Col. Brit. Mus., Longic.* p. 300 (1855).
? Stromatium laticolle, *Pascoe, Trans. Ent. Soc. Lond.* (3) iii, p. 532 (1869).

Varies from testaceous to dark brown in colour, rather densely covered with greyish-tawny pubescence. Antennæ nearly twice as long as the body in the ♂, a little longer than the body in the ♀; first joint closely punctulate, canaliculate anteriorly near the base in the ♂. Prothorax strongly and densely punctate, the punctures more or less hidden by the pubescence; dilated and somewhat rounded at the sides in the male, its width across the middle equal to that of the elytra and marked with a large, densely tomentose depression on each side; more sharply rounded at the sides in the female; the disc with four very feeble obtuse tubercles and a submedian callosity. Elytra rounded at the apex, armed each with a sutural spine; the surface rather densely punctured, the punctures more or less covered over by the pubescence, marked also with numerous large conspicuous punctures with raised front edges each with a tawny seta.

This is a widely distributed species, and the variation in size is pretty considerable. In some males the prothorax is relatively not so wide as in larger males; it is possible that *S. laticolle*, Pasc., founded upon a large male from Batchian Island, is only a form in which the prothorax has reached its maximum of development.

Length 17–25; *breadth* 4½–7½ mm.

Hab. Assam (*Doherty*); Upper Burma: Teinzo (*Fea*). Hong Kong; South China; Siam; Malay Peninsula; Philippines; Borneo; Celebes; Ceram; Amboina; Batchian.

Genus **ZOODES**.

Zoodes, *Pascoe, A. M. N. H.* (3) xix, p. 319 (1867); *Lacord. Gen. Coléopt.* viii, p. 281 (1869).

Type, *Z. maculatus*, White.

Range. Ceylon, India, Burma, Malay Peninsula.

Head with a transverse ridge between the antennæ, acutely prominent on each side, especially in the ♂; front short, transversely depressed at its junction with the clypeus; eyes deeply emarginate, with large lower and narrow upper lobe. Antennæ sparsely pilose, about one-third longer than the body in the ♂, a little longer than the body in the ♀; first joint short, pyriform or obconical; third a little longer than the fourth; fourth to tenth

gradually and successively shorter; eleventh longer than the tenth in the ♂. Prothorax transverse, slightly rounded at the sides; broader in front than at the base, especially in the ♂. Elytra long, parallel-sided, rounded or truncate at the apex, sometimes armed with short spines or teeth. Legs moderately long; femora slightly compressed, broader towards the middle, the hind pair not reaching to the apex of the elytra. Acetabula of front coxæ angulate outwards and open posteriorly; intercoxal process of prosternum sharply deflexed posteriorly and narrowed towards the end, that of the mesosternum much broader and emarginate posteriorly.

110. **Zoodes maculatus**, *White* (Stromatium?), *Cat. Col. B. M., Longic.* p. 301, pl. 7, fig. 4 (1855): *Pascoe, A. M. N. H.* (3) xix, p. 319 (1867); *Lacord. Gen. Coléopt.* viii, p. 282 (1869).

Yellowish-testaceous, faintly covered above with a short greyish pubescence; prothorax narrowly black at the front margin, marked on the disc in both sexes with two small black tubercles placed transversely before the middle; elytra paler than the thorax, narrowly and more or less completely bordered with black along the outer margin, marked on the disc of each with black spots or fasciæ:—one small spot, occasionally absent, a little behind the middle of the base, two spots, usually forming a narrow oblique band, placed a little before the middle, and two spots forming an angulate, somewhat V-shaped, fascia, at a greater distance behind the middle, the outer ends of these two bands sometimes joined by a dark longitudinal streak. Antennæ testaceous; the first joint strongly and somewhat abruptly thickened in the ♂, with an irregular depression at the side where the thickening begins, the same joint gradually and less strongly thickened in the ♀. Prothorax of the ♂ broad in front and gradually narrowed from the middle to the base; that of the ♀ feebly tuberculate at the middle of each side, slightly narrowed in front as well as towards the base and with three feeble elevations on the disc near the base. Elytra each rounded externally at the apex, somewhat truncate towards the suture and armed at the suture with a slender spine. Body beneath and legs with a faint covering of grey pubescence.

Length 16–31; *breadth* $4\frac{3}{4}$–9 mm.

Hab. Ceylon.

111. **Zoodes quadridentatus**, sp. n.

Nearly allied to *Z. maculatus*, White, with a close general resemblance to that species; the apex of each elytron distinctly truncate and bidentate, the tooth at the outer angle as strong as that at the suture and the first antennal joint in the male gradually and less strongly thickened. Prothorax margined with black behind as well as in front, with an arcuate black band on the lower part of each side. In the female the black markings on the elytra are very much as in *Z. maculatus*; in the male the

ante-median and post-median black fasciæ are broader and more distinct and joined at their inner ends with a longitudinal black streak, while the space between them is of a distinctly paler colour than the rest of the elytra.

Length 17–24; *breadth* 5–6½ mm.

Hab. S. India: Anaimalai Hills (*H. L. Andrewes*).

112. **Zoodes fulguratus**, sp. n.

♀. Yellowish brown, the elytra of a paler, somewhat whitish colour; faintly covered with short grey pubescence and furnished besides with long scattered hairs, especially on the underside; head marked on the front with a triangular black spot which extends between the antennal supports and joins a transverse black spot on the vertex; prothorax with the front and hind margins, two short bands on the disc extending from the base to the middle and a few spots on each side, blackish brown; elytra each with the sutural and lateral borders, a short oblique vitta at the base, two zigzag bands, placed one before the other, at some distance behind the middle and a line joining the inner ends of these two bands, dark brown; the space between the zigzag bands somewhat paler than the rest of the elytron. Prothorax with a small tubercle at the front end of each of the two discal bands, and some granules along the bands. Elytra rounded and unarmed at the apex, each with two slightly raised dorsal lines.

Length 22; *breadth* 6 mm.

Hab. Upper Burma: Maymyo (*Bingham*); Ruby Mines (*Doherty*).

113. **Zoodes nilgiriensis**, sp. n.

♂. Dark brown, rather densely covered above with short greyish-tawny pubescence; elytra with a darker patch on each a little behind the middle, enclosing an irregular pale yellow band or spot, which is variable in size and sometimes almost obsolete. Antennæ more than one-third longer than the body; first joint gradually thickened from the base, feebly depressed in front near the base. Prothorax broad in front, gradually narrowed from the middle to the base; the disc with two feeble tubercles before the middle, a short median impression near the base, and another feeble impression on each side. Elytra rounded, or sometimes subtruncate at the apex. Body beneath and legs covered with short grey pubescence intermixed with some longer hairs.

Fig. 46.—*Zoodes nilgiriensis*, Gahan, ♂.

♀. Reddish brown, the elytra marked as in the ♂. Antennæ a little longer than the body. Prothorax narrowed in front as well as towards the base, rounded at the middle of each side; the

discal tubercles and the median basal impression more distinct than in the ♂, and the lateral impressions absent.

Length 13–21; *breadth* 3½–6 mm.

Hab. Nilgiri Hills (*H. L. Andrewes*).

114. **Zoodes eburioides**, *Lacord. Gen. Coléopt.* viii, p. 282 (1869).
?Stromatium carinulatum, *Karsch, Berl. Ent. Zeit.* xxvi, p. 389 (1882).
Stromatium signiferum, *Pasc. A. M. N. H.* (5) xv, p. 53 (1885).

Yellowish or brownish testaceous, covered above with a short greyish pubescence; elytra marked each with two white spots that are somewhat variable in size,—the first at the base, appears as two short unequal spots united in front and divided posteriorly, and has a more or less distinct black border, the second placed for the most part behind the middle usually takes the form of an irregular oblique fascia made up of two spots side by side, the inner one somewhat in advance of the outer, this spot also bordered with black except on the outer side, which approaches more or less closely to the outer margin of the elytron. Antennæ about one-third longer than the body in the ♂, the first joint blackish brown, the rest testaceous; a little longer than the body and entirely testaceous in the ♀. Prothorax of the ♂ about one-fourth broader than long, rounded at the sides, narrowed a little at the base, pubescent above and marked with two very faint impressions; that of the ♀ shorter and narrower, somewhat parallel-sided, with a shorter and fainter pubescence and five feeble nodosities on the disc. Body beneath sparsely clothed with grey pubescence.

Length 16–25; *breadth* 4–6 mm.

Hab. Ceylon.

115. **Zoodes compressus**, *Fab.* (Callidium) *Mantissa Ins.* i, p. 153 (1787).

Entirely brown in colour, the head and prothorax of a rather darker shade than the other parts. Head densely rugulose-punctate; the clypeus with an elliptical or semicircular, slightly depressed area adjoining the front; the antennal supports acutely angulate on the inner side in the ♀, raised in a short blunt spine in the ♂. Antennæ one-third or so longer than the body in the ♂, nearly as long as the body in the ♀; sparsely fringed with longish hairs beneath; first joint stout, strongly and densely punctured, second to fifth or sixth sparsely punctate and subnitid, the succeeding joints covered with a very short fine pubescence. Prothorax of ♂ widest just before the middle, narrowed a little more towards the base than in front; the surface opaque, evenly convex, not very densely covered with rather small asperate punctures, each of which bears a short, pale, curved seta; a median line on posterior half subnitid; prothorax of ♀ widest at the middle, the surface more densely asperate and setose; with two very small tubercles on the disc a little before the middle. Elytra very densely rugulose-punctate, appearing as if granulated; very slightly nitid; a little flattened

near the suture; separately rounded at the apex and armed each with a short spine at the suture. Hind breast and abdomen subnitid, sparsely pubescent. Legs subnitid, minutely punctulate and sparsely pubescent; femora elongate-fusiform, laterally compressed, widest at about the middle, gradually narrowed towards base and apex; first joint of hind tarsus slightly longer than the second and third united. The elytra are relatively broader in the ♀ than in the ♂, a little broader than the broadest part of the prothorax, whereas in the ♂ they are not quite so broad.

Length 16–24; *breadth* 4–7 mm.

Hab. Gwalior; Madras; Malabar; Siam.

Group *CERAMBYCINI.*

The head usually has in front a central area limited by impressed lines or grooves; gula with short mentigerous process; ligula membranous. Antennæ longer as a rule than body in ♂, with third, fourth and sometimes fifth joints more or less thickened at apex, fourth shorter than the third or fifth. Acetabula of front coxæ generally rounded, sometimes angulate, on outer side, closed or very nearly closed posteriorly; the intercoxal process more or less strongly dilated at the end. Acetabula of middle coxæ open to epimera. Metasternum without scent-pores. First sternite of abdomen distinctly longer than the second. Wing-venation reduced, apparently by disappearance of posterior branch of Cu 1 and of connecting-vein between Cu 2 and A 1.

The genera of this group are exceedingly variable in structure, and do not admit of being characterized with any great amount of precision. The characters given in the synopsis which follows, though applying to the great majority of the species in each genus, may possibly be found not to apply to all.

Synopsis of Genera.

A. Acetabula of front coxæ angulated on outer side.
- a. Prothorax strongly tuberculate or spined on each side . . . . PLOCÆDERUS, p. 120.
- b. Prothorax unarmed at sides . . . . NEOCERAMBYX, p. 124.

B. Acetabula of front coxæ not angulate on outer side, or but very feebly so.
- a. Antennæ not strongly compressed and dilated on anterior side, usually much longer than body in ♂.
  - a′. Prothorax not, or but very little, longer than broad.
    - a^2. Head with obtuse median carina between upper lobes of eyes . . . . . . ÆOLESTHES, p. 126.
    - b^2. Head with usually a median groove, never a carina, between upper lobes of eyes.
      - a^3. Antennal supports acutely prominent on inner side . . . . MASSICUS, p. 129.

b^3. Antennal supports more or less depressed.
a^4. Antennæ spined behind at apex of joints three to ten .... [p. 131. HOPLOCERAMBYX,
b^4. Antennæ not spined behind.
a^5. Intercoxal process of prosternum truncate or tuberculate posteriorly.
a^6. First antennal joint with narrow cicatrix at apex .. DIORTHUS, p. 132.
b^6. First antennal joint without cicatrix at apex.
a^7. Femora not carinate .... PACHYDISSUS, p. 133.
b^7. Femora finely carinate along each side ...... DEROLUS, p. 135.
b^5. Intercoxal process of prosternum gradually sloped posteriorly .... MARGITES, p. 137.
b'. Prothorax distinctly longer than broad, at least in ♂.
a^2. Antennæ not fringed beneath in ♂; eyes less deeply emarginate ...... DYMASIUS, p. 139.
b^2. Antennæ fringed with short hairs beneath in ♂; eyes divided or deeply emarginate .... DIALEGES, p. 141.
b. Antennæ more or less deeply compressed and dilated on anterior side, not much longer, sometimes shorter, than body in ♂.
a'. Prothorax distinctly longer than broad. SEBASMIA, p. 143.
b'. Prothorax very little, or not at all longer than broad.
a^2. Elytra not carinate at sides near apex.
a^3. Prothorax broader than long; antennæ as long as body in ♀ .... [p. 145. TRACHYTOPHUS,
b^3. Prothorax not broader than long; antennæ much shorter than body in ♀ .... RHYTIDODERA, p. 146.
b^2. Elytra carinate at sides near apex .. XOANODERA, p. 148.

Genus PLOCÆDERUS.

Plocæderus, *Thoms. Essai Class. Ceramb.* p. 197 (1861); *Lacord. Gen. Coléopt.* viii, p. 254 (1869).
Plocederus, *Gemm. & Harold, Cat. Col.* ix, p. 2799 (1872).

Type, *P. cyanipennis*, Thoms., a West-African species.

Range. Africa south of the Sahara, Western Asia, and Indo-Malayan Region.

Head with a median carina between the upper lobes of the eyes which extends downwards along the inter-antennary sulcus; front with a transverse subelliptical impression. Antennæ of ♂ much longer than the body, those of the ♀ only a little longer; third joint one-third longer than the fourth; fifth to tenth subequal to each other and to the third, sharply edged in front and angulate

or spined at the apex, the third and fourth joints sometimes also angulate or spinose at the apex. Prothorax transverse, armed with a spine or prominent tubercle on each side, corrugate above. Elytra truncate at the apex and usually dentate or spined at the angles. Legs rather long, femora laterally compressed; first joint of hind tarsus shorter than the next two united. Acetabula of front coxæ angulate on the outer side and almost closed posteriorly. Prosternum raised between the coxæ, vertical or almost vertical posteriorly, and truncate or tuberculate at its lower angle.

I. *Prothorax with a strong, sharp, and slightly recurved spine on each side.*

116. **Plocæderus ferrugineus**, *Linn.* (Cerambyx) *Syst. Nat.* 12th ed. p. 626 (1766).
Cerambyx gigas, *Fab. Mant. Ins.* i. p. 132 (1787).
Cerambyx ferrugineus, *Fab. Ent. Syst.* i, 2, p. 256 (1792); *Oliv. Ent.* iv, no. 67, p. 9, pl. 18, fig. 134 (1795).
Lamia umbrina, *Dalm. in Schoen. Syn. Ins.* i, 3, *Append.* p. 161 (1817).
Hammaticherus nitidus, *White, Cat. Col. B. M., Longic.* p. 127 (1853).
Cerambyx versutus, *Pascoe, Trans. Ent. Soc.* (2) v, p. 20 (1859).
Plocæderus ferrugineus, *var., Gahan, A. M. N. H.* (6) v, p. 51 (1890).

Reddish brown, the head and thorax dark brown or almost black, the sides of the breast and the greater part of the antennæ also, inclining to a dark brown colour; clothed with a yellowish-grey pubescence which is somewhat longer and denser on the underside of the body, but very short and faint on the upperside, especially on the elytra. Antennæ of ♂ twice as long as the body, very minutely granulated; joints fifth to tenth angulate in front at the apex; antennæ of ♀ scarcely longer than the body, not granulate, joints fifth to tenth more distinctly angulate than in the ♂. Prothorax armed with a strong, sharp, slightly recurved spine on each side, strongly and irregularly corrugated above. Elytra very finely and closely punctulate all over, not less finely near the base than towards the apex; very faintly pubescent at the sides and almost bare of pubescence on the disc; apices dentate at the suture and somewhat acute at the outer angles.

Length 26–45; *breadth* 8–15 mm.

Hab. Ceylon and Trivandrum.

Var. *niger*, Gahan, agrees with the typical form except in the colour of the elytra; these are very dark brown or almost black.

Hab. Bengal.

117. **Plocæderus obesus**, *Gahan, A. M. N. H.* (6) v, p. 51 and (6) vi, p. 259 (1890).
Plocederus pedestris, *Cotes* (nec *White*), *Ind. Mus. Notes*, i, no. 2, pl. v, fig. 4.

Of a reddish-chestnut or testaceous colour, clothed with a short

but rather dense tawny-grey pubescence, which on the upperside, as well as on the underside of the body, almost completely covers the derm; prothorax blackish at the front and hind margins; elytra more or less black along the sutural and lateral edges; antennæ ferruginous, with the intermediate joints usually tipped with black at the apex. Antennæ of ♂ much longer than the body; first joint stout, rugulose-punctate; the remaining joints very finely granulate, fifth to tenth acutely angulate in front at the apex; antennæ of ♀ scarcely longer than the body, not granulate; joints fifth to tenth acutely angulate at the apex. Prothorax armed with a strong, sharp, slightly recurved spine on each side; strongly corrugate above, the ridges sometimes very irregular, sometimes more or less transverse and wavy. Elytra very finely and closely punctulate all over, but with the punctures hardly visible owing to the covering of pubescence; the truncate apices shortly spined at each of the angles.

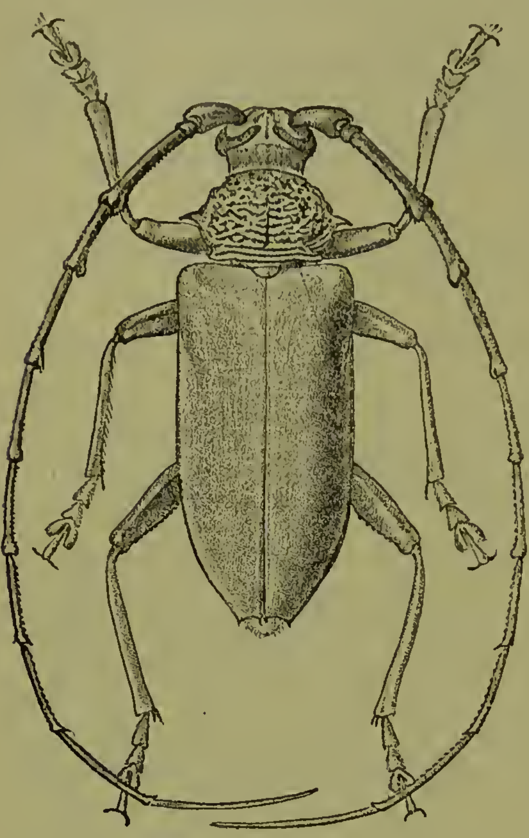


Fig. 47.
Ploeœderus obesus, Gahan, ♂. × $\frac{6}{5}$.

Length 27–45; *breadth* 9–15 mm.

Hab. Northern India: Sikkim; Calcutta; Assam; Burma; Siam; Andaman Islands. Recorded also from Ceylon, but this record requires confirmation.

This species, wrongly identified as *P. pedestris*, White, is noticed in ‘Indian Museum Notes’ (vol. i, no. 2, p. 91) as being injurious to Säl (*Shorea robusta*) and Jingham (*Odina wodier*), and is, no doubt, as stated in the ‘Notes,’ the insect referred to in the following extract from Mr. R. Thompson’s ‘Report on Insects injurious to Woods and Forests’ (1867) p. 415:—

“A third *Monochamus* beetle was found under circumstances of extraordinary development. The pupæ were discovered in solid cocoons, made of a substance resembling lime. The shell was fully the sixteenth of an inch in thickness, quite hard and firm, offering in fact more resistance to the pressure of the fingers than would a pigeon’s egg. They were discovered beneath the

bark, imbedded between it and the wood, in a felled tree of the *Butea frondosa* or Dhak. The larvæ had apparently only lived on the sap-wood, and underwent the second metamorphosis on the site of their original operations; another remarkable fact was that these beetles are in the perfect state as early as March." In a footnote he adds:—"I have since obtained numerous specimens of these beetles and their cocoons; imbedded to a depth of eight inches in logs of *Odina wodier* and *Bombax heptaphyllum*. They are the commonest and earliest variety of *Monochami* out, the perfect insects having been obtained as early in the season as November."

Cocoons of *Plocæderus obesus* from the Shan States, given to the British Museum by Mr. Oates, answer perfectly to the above description. They are egg-like, and consist almost entirely of calcium carbonate, dissolving readily in acids and leaving no residue. African species of the genus form similar cocoons; so that probably all the species are alike in this respect.

II. *Prothorax with a rather short, conical spine on each side.*

118. **Plocæderus pedestris**, *White* (Hammaticherus), *Cat. Col. B. M., Longic.* p. 127 (1853).

Almost black, with the antennæ and legs ferruginous; clothed with a faint grey pubescence. Antennæ of the ♀ a little longer than the body; joints fifth to tenth denticulately produced at the anterior apical angle. Prothorax armed with a rather short conical spine on each side; strongly and irregularly corrugate above. Elytra slightly narrowed backwards; finely and closely punctate, the punctures on the basal half, especially near the base, a little larger and more crowded together than those on the apical half; the truncate apices dentate at each of the angles.

Length 25–28; *breadth* 7½–8 mm.

Hab. North-West, Northern, and Central India: Mhow

119. **Plocæderus humeralis**, *White* (Hammaticherus), *Cat. Col. B. M., Longic.* p. 127 (1853).

Reddish brown or ferruginous in colour, the elytra of a more reddish or testaceous tint, suffused with dark brown at the shoulders and sometimes also along the sides; the femora sometimes tipped with dark brown at the apex. Antennæ of the ♀ a little longer than the body, those of the ♂ much longer and with a thicker first joint; joints fifth to tenth denticulately produced at the anterior angle. Elytra punctulate in the same manner as in *P. pedestris*, and similarly quadri-dentate at the apex.

Length 22–32; *breadth* 6¼–10 mm.

Hab. Northern India; Bombay; S. India; Burma: North Chin Hills.

120. **Plocæderus consocius**, *Pascoe* (Cerambyx), *Trans. Ent. Soc. Lond.* (2) v, p. 20 (1859); *Gahan* (Plocederus), *A. M. N. H.* (6) vi, p. 258 (1890).

Ferruginous-brown, with the elytra of a dark-brown colour along the outer borders; clothed above with a faint greyish pubescence. Prothorax armed with a short and rather blunt spine on each side; strongly but somewhat irregularly wrinkled above. Elytra finely and closely punctured, the punctures on the basal part unite and form a fine rugosity, those near the apex are sparser and more minute; the truncate apices with a spine at each angle.

This species is very closely allied to *P. humeralis*, White, and apart from colour, differs from it only in being somewhat more sparsely punctulate towards the apex of the elytra, also the latter are more distinctly quadri-spinose.

Length 26; *breadth* 8¼ mm.

Hab. Ceylon.

Genus NEOCERAMBYX.

Neocerambyx, *Thoms. Essai Class. Ceramb.* p. 194 (1861); *Lacord. Gen. Coléopt.* viii, p. 250 (1869).

Type, *N. paris*, Wied.

Range. India, Burma, Siam, Malay Peninsula, Borneo, and Japan.

Head strongly exserted, marked with a median groove above between the eyes, antennal supports depressed; front subvertical, genæ moderately long; eyes not extending anteriorly past the condyles of the antennæ. Antennæ very much longer than the body in the ♂, shorter than the body in the ♀; joints fifth to tenth subangulate in front at the apex; fourth joint shorter than the third or fifth; eleventh in the ♂ much longer than the tenth. Prothorax transverse, a little rounded in the middle at each side, narrowed in front, marked with a transverse groove near the apex and another near the base; covered above in most of its extent with strong undulating and irregular ridges. Elytra convex, narrowed slightly posteriorly, rounded at the apex. Legs moderately long, subequal in length; femora sublinear, the hind pair not reaching to the apex of the elytra; first joint of hind tarsus not quite equal to the next two united. Acetabula of front coxæ angulated on the outer side.

121. **Neocerambyx paris**, *Wied.* (Cerambyx) *Germ. Mag. Ent.* iv, p. 167 (1821).
Cerambyx brama, *Newman, Ent. Mag.* v, p. 493 (1837).

Dark brown, covered with golden pubescence, which is denser on the elytra, and there also gives *moiré* reflections. Head with a deep groove above between the eyes; the elliptical impression on the face is well marked and limits a central *plaque* which lies below the level of the surrounding parts. Antennæ twice as long

as the body in the male; first joint stout, subcylindrical, transversely wrinkled posteriorly; third and fourth but slightly thickened at the apex; the third nearly one-third longer than the fourth; fifth to tenth subequal or very slightly increasing in length, each at least as long as the third; eleventh more than twice as long as the tenth; antennæ of ♀ about three-fourths the length of the body; fifth joint slightly shorter than third; sixth to tenth gradually diminishing in length; the eleventh barely longer than the tenth. Prothorax feebly rounded at the sides, marked with a transverse groove near the apex and two narrow grooves near the base, the anterior of these two sinuous, the posterior nearly transverse; disc with an oblong smooth space, not always well defined, extending from the sinuate basal groove up to the middle and limited on each side by a longitudinal impression; the rest of the upper surface between the apical and basal grooves covered with strong irregular ridges. Elytra separately rounded at the apex, armed each with a short spine at the suture. Interocular space on the ventral side of the head densely and finely punctate and thinly pubescent; this punctate space, which is somewhat concentric in shape, is depressed anteriorly and preceded by a sinuately transverse ridge, in front of which is a groove. The intercoxal process of prosternum forms an arch which reaches almost to a level with the coxæ in the middle; it is slightly canaliculate along the middle and very feebly protuberant posteriorly.

Length 58–78; *breadth* 17–23 mm.

Hab. Mysore: Bangalore; Burma; Siam; Singapore.

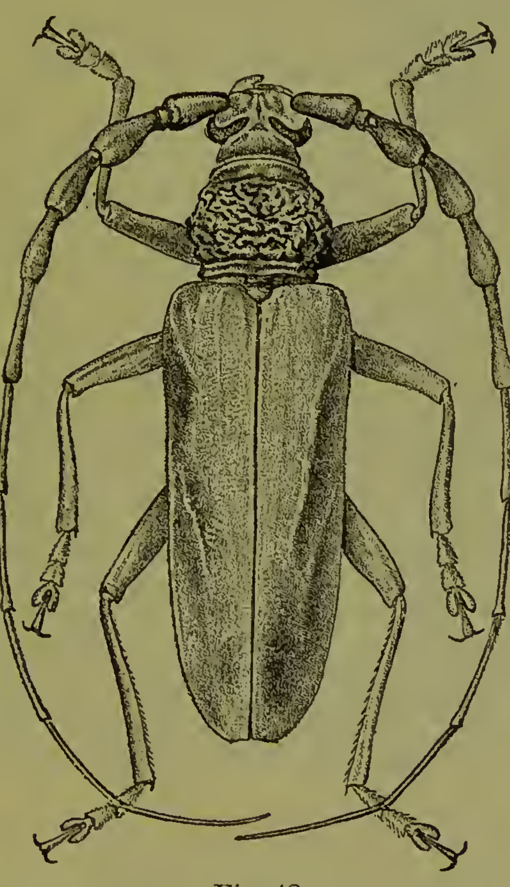


Fig. 48.
Neocerambyx grandis, Gahan, ♂. × 5/8.

122. **Neocerambyx grandis,** *Gahan, A.M.N.H.* (6) vii, p. 20 (1891).

Dark brown; densely covered with silky pubescence which has a slightly golden lustre, and on the elytra gives feeble *moiré* reflections. Head marked above with a narrow and rather feeble median groove extending between the eyes and antennal supports. Antennæ nearly twice as long as the body in the ♂, with the third and fourth joints

very strongly, the fifth less strongly thickened towards the apex, the fourth about equal in length and thickness to the first, the third a little longer and thicker than the fourth, subequal in length to the fifth; shorter than the body in the ♀, with the third and fourth joints very slightly thickened, the seventh to tenth more angulate at the apex than in the ♂. Prothorax somewhat obtusely angulate or protuberant at the middle of each side; the whole of the disc strongly and irregularly rugose. Elytra rounded and unarmed at the apex. Acetabula of front coxæ angulate on the outer side; the intercoxal process vertically deflexed posteriorly.

Length 56–59; *breadth* 15–17 mm.

Hab. Allahabad; Assam (*Atkinson coll.*); Patkai Mts. (*Doherty*).

Genus ÆOLESTHES.

Æolesthes, *Gahan, A. M. N. H.* (6) vi, p. 250 (1890).

Type, *Æ. aurifaber*, White (*Hammaticherus*), a species from Borneo and Penang.

Range. Oriental Region, extending to Kashmir, Baluchistan, and Turkestan in one direction, and to New Guinea and the Solomon Islands in another.

Head marked with a somewhat circular furrow in front, that circumscribes a flattened slightly raised space, with a straight or arcuate transverse groove beneath between the cheeks; vertex with a more or less distinct carina passing from the inter-antennary sulcus in front to a level with the hind border of the eyes posteriorly, also a narrow shallow pit behind the carina. Antennæ of the male much longer than the body, with each of the joints from the third to the fifth thickened at the apex, and each from the fifth to the eighth armed with a small spine at the hinder apical angle; those of the female a little longer than the body, with the same joints more distinctly spined posteriorly, and produced also into a sharp angle or tooth in front at the apex. Prothorax unarmed, rounded or subangulate at the middle of each side, strongly wrinkled above. Elytra clothed with a rich silky pubescence, so arranged that certain parts appear duller or brighter according to the direction of the light falling upon them; the apices truncate, with a spine or tooth at each of the angles. Acetabula of front coxæ very feebly angulate on the outer side; intercoxal process of prosternum raised and more or less truncate posteriorly.

123. Æolesthes basicornis, *Gahan, A. M. N. H.* (6) xi, p. 377 (1893).

Dark brown, covered with a dense greyish or golden silky pubescence, so arranged on the elytra as to present the appearance of a number of spots or patches varying in brilliancy according to the direction of the light; legs reddish brown. Intergenal groove on the underside of the head nearly straight, only

slightly arched forwards in the middle. Antennæ of ♂ about three times as long as the body; first and third joints transversely wrinkled, especially beneath; third abruptly thickened at the apex, with the ring-like thickening projecting most posteriorly; fourth and fifth also thickened slightly at the apex, third a little longer, and fourth a little shorter, than the first; fifth as long as, or

Fig. 49.—*Æolesthes basicornis*, Gahan, ♂. × $\frac{6}{5}$.

slightly longer than the third; sixth to tenth successively longer, eleventh very long; fifth to eighth spined posteriorly, and sixth to tenth dentate in front at the apex. Prothorax protuberant and somewhat tuberculate at the middle of each side; strongly wrinkled above and marked with two longitudinal impressions that converge in front and limit a central space wrinkled less deeply than the rest of the surface. Each elytron truncate in a slightly oblique direction at the apex, and shortly spined at the angles.

Length 35–38; *breadth* $10\frac{1}{2}$ mm.

Hab. Andaman Islands.

124. **Æolesthes holosericea**, *Fab.* (Cerambyx) *Mant. Ins.* i, p. 135 (1787).

Pachydissus velutinus, *Thoms. Syst. Ceramb.* p. 576 (1865).
Pachydissus similis, *Gahan, A. M. N. H.* (6) v, p. 52 (1890).
Neocerambyx holosericeus, *Cotes, Ind. Mus. Notes*, i, no. 2, pp. 60 & 89, pl. 5, fig. 3 (1889).

Dark brown, sometimes reddish brown, densely covered with a silky pubescence of a greyish or a light-brown colour; the elytra

exhibit bands or patches, some duller, some brighter, like watered silk, which change in brilliancy according to the incidence of the light; antennæ and legs with a thinner and more uniform greyish pubescence. Head with a straight or very feebly bisinuate furrow beneath between the cheeks. Third joint of the antennæ smooth, gradually thickened at the apex. Prothorax rounded at each side; irregularly wrinkled above, with a subcentral smooth space which is limited on each side by a longitudinal impression and marked sometimes, especially near its anterior end, with a median groove.

Length 20–35; *breadth* 5½–10 mm.

Hab. North-West India; Bombay; Nilgiris; Ceylon; Assam; Tenasserim; Andaman and Nicobar Islands; Siam; Malay Peninsula.

125. **Æolesthes sinensis,** *Gahan, A. M. N. H.* (6) vi, p. 255 (1890).

Very like *Æ. holosericea*, Fab., but distinguishable by the following characters:—Prothorax somewhat angulate at the middle of each side in both sexes; the upper surface more completely wrinkled, the subcentral space inclosed between the two longitudinal impressions almost as strongly wrinkled as the rest of the surface, and this space also completely divided by a median groove. The elytra are as a rule somewhat darker in colour, and the pubescence, which usually has a yellowish or brownish tint, appears more broken up into patches.

Length 25–30; *breadth* 6½–9 mm.

Hab. Upper Burma; Southern China.

126. **Æolesthes induta,** *Newman* (Hammaticherus), *Entomologist,* i, p. 245 (1842).

Extremely like *Æ. holosericea*, Fab., in size, form, coloration, &c., but with the furrow which crosses the underside of the head between the cheeks very clearly defined, and strongly arched backwards in the middle: this character alone serves to distinguish it from *holosericea*, in which the furrow is either straight, slightly arched forwards, or feebly bisinuate, and not quite so deep and well defined.

Length 23–38; *breadth* 6½–11½ mm.

Hab. Ceylon; Upper Burma: Bhamo (*Fea*); Siam; Sumatra; Java; Borneo; Philippine Islands.

127. **Æolesthes indicola,** *Bates* (Neocerambyx), *Entomologist*, xxiv, *Suppl.* p. 21 (1891).

Closely allied to *Æ. holosericea*, Fab., and *Æ. induta*, Newm.; agrees with them in the form of the prothorax and in that it has the sixth to eighth antennal joints armed with a distinct spine at the apex on the posterior side. The rugosities of the prothorax are more confused and the oblong discoidal plate much less defined and

somewhat rugose. The intergenal groove on the underside of the head is much widened and forms a straight, transverse, rather shallow depression. The prosternal process is also different and is arcuated to the tip, the latter not projecting as in the above-mentioned species. Outer apex of elytra obtusely angulated, not dentate.

Length 25 mm.

Hab. N.W. India: Kulu (*Capt. Graham Young*).

128. **Æolesthes sarta**, *Solsky* (Pachydissus), *Hor. Soc. Ent. Ross.* viii, p. 150, pl. 5, fig. 4 (1871).

Much larger on the average than *Æ. holosericeus*, with the pubescence of a greyish colour, the bright patches on the elytra with a silvery lustre, whereas in most of the other species of the genus they have a golden or coppery tint. Prothorax subangulate at the sides; the discoidal plate not very well defined and more or less rugose. Elytra obliquely truncate at the apex, the outer angle unarmed and the sutural one dentate or shortly spined. The antennæ not as long as the body in the female, and twice or more than twice the length of the body in the male; in the latter sex the spines at the posterior apices of joints six to eight are exceedingly minute and scarcely visible. Intergenal groove on the underside of the head straight and rather shallow. Intercoxal process of prosternum truncate posteriorly.

Length 33–44; *breadth* 9–13 mm.

Hab. Baluchistan: Quetta (*E. P. Stebbing*); Turkestan; Western Tibet.

Genus MASSICUS.

Conothorax, *Thoms.* (*nec Jekel*) *Syst. Ceramb.* p. 230 (1864).
Massicus, *Pascoe*, *A. M. N. H.* (3) xix, p. 319 (1867); *Lacord. Gen. Coléopt.* viii, p. 260 (1869).

Type, *M. pascoei*, Thoms., a species from the Malay Peninsula.

Range. Ceylon, Malay Peninsula, and Borneo.

Head above between the eyes with a short median groove; antennal supports prominent, acute on the inner side; eyes not reaching below the condyles of the antennæ in front; genæ rather short but distinct. Antennæ a little longer than the body in the ♀ and very much longer in the ♂; first joint carinate, sometimes angulate anteriorly at the apex; joints fifth or sixth to tenth acutely angulate or dentate at the apex on the anterior side, sometimes spined at the apex on the posterior side; third and fourth thickened towards the apex, the eleventh very long in the ♂. Prothorax not longer or but slightly longer than broad, narrowed in front but less so at the base. Elytra long, gradually narrowed posteriorly and truncate at the apex, with the sutural angles spined. Femora nearly parallel-sided, the hind pair not reaching to the elytral apex; first joint of hind tarsus as long as the next two united or longer. Intercoxal process of prosternum truncate posteriorly.

129. **Massicus unicolor**, sp. n.

♂. Blackish-brown, covered all over with short pubescence of a uniform greyish tint. Antennæ not quite twice the length of the body; the first joint short and thick, not reaching to the front margin of the prothorax, sharply edged and angulate in front at the apex; third half as long again as the first, and strongly thickened from the middle towards the apex; fourth subequal in length to the first, thickened less strongly than the third; fifth longer than the third and shorter than the sixth; sixth to eighth subequal in length; ninth and tenth shorter; eleventh nearly twice as long as the tenth; sixth to tenth angulated at the apex in front, unarmed posteriorly. Prothorax somewhat rounded at the sides, constricted a little behind the apex, marked with one transverse furrow near the apex and with two near the base; the whole of the upper surface between these grooves coarsely and irregularly corrugated. Elytra transversely truncate at the apex, with the outer angles obtuse and the sutural ones spined. Intercoxal process of prosternum truncate and prominent posteriorly. First joint of hind tarsus about equal in length to the second and third united.

Length 55; *breadth* 15 mm.

Hab. Assam: Patkai Mts. (*Doherty*).

130. **Massicus venustus**, *Pascoe* (Cerambyx) *Trans. Ent. Soc. Lond.* (2) v, p. 19 (1859).

Body and legs entirely covered with a dense dull ochreous-brown pubescence; first three or four joints of the antennæ similarly pubescent, the remaining joints with a much finer greyish pubescence through which the dark brown colour of the derm appears. Antennæ of ♂ half as long again as the body; first joint stout, subcylindrical, with a narrow cicatrix at the apex bounded by a short oblique carina; third and fourth joints thickened towards the apex, third longer than the fourth, and fourth slightly longer than the first; each of the joints from the fifth to the tenth produced in a more or less sharp angle or tooth in front and furnished with a short spine posteriorly, at the apex; sixth and seventh joints subequal, each longer than any other except the eleventh, which is more than twice as long as the tenth. Prothorax slightly longer than broad, somewhat rounded at the sides, narrowed in front, and a little also towards the base; strongly corrugated above in slightly sinuous transverse lines. Elytra truncate each in a slightly oblique direction at the apex, with a very short spine at the suture. Prosternum raised between the coxæ, vertically inclined posteriorly.

Length 36–57; *breadth* 9–15 mm.

Hab. Ceylon.

Genus HOPLOCERAMBYX.

Hoplocerambyx, *Thomson, Syst. Ceramb.* p. 229 (1864); *Lacord. Gen. Coléopt.* viii, p. 260 (1869).

Type, *H. spinicornis*, Newm.

Range. Northern India to New Guinea.

Head strongly exserted; vertex marked with a deep median groove extending between the eyes and continued as a shallower groove between the antennal supports; the latter depressed; front oblique, marked with a fovea on each side; mandibles rather long in the ♂, straight at base, sharply turned in at apex; eyes deeply emarginate, not extending past the antennal supports in front, the genæ in consequence rather long. Antennæ from one-fifth to one-third longer than the body in the male, and a little shorter than the body in the female, the joints from the third to the tenth spined posteriorly at the apex and the fifth to tenth acutely angulate or subdentate in front, especially in the female; fourth joint much shorter than the third or fifth, eleventh joint much longer than the tenth in the male, a little longer than the tenth in the female. Prothorax somewhat longer than broad, constricted in front, rounded at the sides between the anterior constriction and the base; transversely wrinkled above, but with a smooth space on the middle of the disc. Elytra convex, narrowed posteriorly, truncate at the apex. Legs moderately long; femora slightly compressed, the hind pair scarcely reaching to the apex of the elytra in the ♂; first joint of hind tarsus nearly as long as the next two united. Acetabula of front coxæ closed on the outer side as well as posteriorly; intercoxal process truncate posteriorly.

131. **Hoplocerambyx spinicornis**, *Newman* (Hammaticherus), *Entom.* i. p. 245 (1842).
Cerambyx? morosus, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 92 (1857).
Hoplocerambyx relictus, *Pascoe, P. Z. S.* 1866, p. 528.
Hoplocerambyx morosus, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 515 (1869).

Brownish black, the elytra varying in colour from piceous to reddish brown; a fine grey pubescence covers the head, prothorax, antennæ, legs, and underside; the elytra more densely covered with a silky pubescence of a fulvous grey tint and somewhat banded in lighter and darker shades which alter with the incidence of the light. Head with the eyes well separated above and the space between marked with a deep median groove; a shallower groove, bounded on each side by a slight carina, extends thence between the antennal tubers; gular area with three strong transverse ridges. Antennæ of the male longer than the body by from one-fifth to one-third of their length according to the size of the individual; faintly pubescent; first joint sparsely and strongly punctured, third to sixth or seventh more or less asperate at the edges, flattened or slightly canaliculate above;

antennæ of the female shorter than the body, more pubescent than those of the male, the first joint sparsely punctured, the third and succeeding joints somewhat flattened above, but not roughened at the edges. Prothorax a little longer than broad; the disc with a slightly raised oblong space in the middle, the rest of the surface rather strongly transversely wrinkled but with the ridges more or less broken and convolute towards the sides. Elytra with a slight elevation close to the suture at about one-fourth of their length from the base; each elytron obliquely truncate at the apex, with a spine at the suture and a feeble tooth at the outer angle; the surface, especially where rubbed bare of pubescence, has two kinds of punctures, some minute and very dense, others larger and less densely spread. The claw-bearing joint of the tarsi long and the paronychium nearly always distinctly visible between the claws.

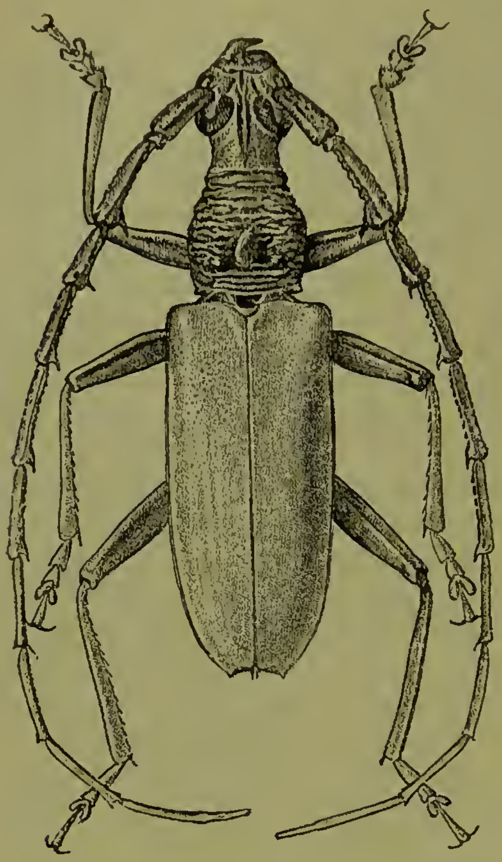


Fig. 50.—*Hoplocerambyx spinicornis*, Newm., ♂. × 6/5.

As will be seen by the measurements given, this species varies in size to a remarkable extent. It varies also in the relative length of the male antennæ, these are shorter in proportion in small specimens and longer in the larger and more fully developed ones.

Length 20–60; *breadth* 5–16 mm.

Hab. Allahabad; Nepal; Assam (*E. P. Stebbing*); Tenasserim: Thagata (*Fea*); South Afghanistan; Penang; Singapore; Sumatra; Borneo; Philippine Islands.

Genus **DIORTHUS.**

Diorthus, *Gahan, A. M. N. H.* (6) vii, p. 27 (1891).

Type, *D. simplex*, White.

Range. India, Ceylon, Burma, Siam, Java, Baluchistan, Aden, West Africa, and Mauritius.

Allied to *Pachydissus*, Newm., but relatively shorter and broader in form. Antennæ nearly twice as long as the body in the ♂, furnished with a short fringe of fine hairs beneath; the first

joint with a narrow cicatrix at the apex limited by a short transverse carina. Elytra truncate at the apex. Femora finely carinate along each side close to the ventral border. Intercoxal process of the prosternum subtruncate posteriorly.

132. **Diorthus simplex**, *White* (Hammaticherus), *Cat. Col. B. M., Longic.* p. 130 (1853).
Cerambyx holosericeus, *Oliv.* (*nec Fab.*) *Ent.* iv, no. 67, p. 14, pl. 17, fig. 127 (1795).
Cerambyx vernicosus, *Pascoe, Trans. Ent. Soc.* (2) v, p. 19 (1859).
Pachydissus inclemens, *Thoms. Syst. Ceramb.* p. 576 (1865).
Neocerambyx sordidus, *Pascoe, Trans. Ent. Soc.* 1888, p. 491.

Fig. 51.
Diorthus simplex, White, ♂. × 7/6.

Varies in colour from black to reddish brown, not very densely covered with short pubescence of a greyish or brownish-grey tint. Head with a median impressed line or groove above, between the eyes. Antennæ not quite so long as the body in the ♀, and from one and a half times to nearly twice as long as the body in the ♂, fringed with short delicate grey hairs beneath; third and fourth joints nodose at the apex, the third much longer than the fourth; fifth to tenth compressed and angulated anteriorly at the apex. Prothorax rounded at the sides, somewhat constricted in front, irregularly and not very strongly wrinkled above in a general transverse direction, marked on the disc with some feeble longitudinal and oblique grooves which together form a somewhat crown-shaped impression. Elytra truncate at the apex, with a short spine from each at the sutural angle; the pubescence covering them more or less glossy, and generally somewhat thinner on each side in front of the middle so that the colour of the underlying derm becomes more apparent there.

Length 16–29; *breadth* 4½–8 mm.

Hab. Baluchistan: Ormarah (*W. D. Cumming*); Karachi (*F. W. Townsend*); Bengal; Madras; Ceylon; North Burma; Siam; Java; Aden; Mauritius; West Africa.

Genus **PACHYDISSUS.**

Pachydissus, *Newman, Entom. Mag.* v, p. 494 (1838); *Lacord. Gen Coléopt.* viii, p. 265 (1869).

Type, *P. sericus*, Newm., an Australian species.

Range. This genus, as now restricted, is almost confined to the Australian Region; one or two species belong to the Oriental and a few also to the African Region.

Head with a more or less distinct groove above between the eyes; the antennal supports narrowly separated; the front sub-

vertical; the clypeus with impressions that mark off a transversely elliptical area adjoining the front; eyes variable in size but generally large; the gula with one or more transverse grooves or depressions in front. Antennæ shorter than the body in the ♀, usually longer than the body in the ♂, but never twice as long; third to fifth joints more or less strongly thickened at the apex, fifth to tenth angulate in front and never spined posteriorly at the apex. Prothorax more or less transverse, rounded at the sides. Elytra moderately long, truncate or rounded at the apex. Legs rather long, the femora sublinear, not carinate; the hind pair reaching to the apex of the elytra in the ♂, or nearly so. First joint of the hind tarsus not longer than the next two united. Acetabula of front coxæ rounded, or sometimes very narrowly angulated on the outer side; the intercoxal process vertical or subvertical posteriorly and frequently tuberculate near the end.

133. **Pachydissus parvicollis**, *Gahan, A. M. N. H.* (6) vii, pp. 25 & 29 (1891).

Dark chestnut-brown, not very densely covered with a short silky, somewhat golden-yellow pubescence, and so arranged on the elytra as to give faint wavy reflexions in certain lights. Head marked above with a short median groove which extends from between the eyes to a little distance beyond them posteriorly; antennal supports separated by a narrow groove-like interval; eyes rather large, the genæ somewhat short. Antennæ slightly shorter than the body in the ♀, exceeding it by from one-third to nearly half of their length in the ♂; third to fifth joints subnodose at the apex; third and fifth subequal, each about one-third longer than the first or fourth. Prothorax slightly protuberant at the middle of each side, narrowed towards base and apex, transversely and not very strongly rugose above, with the ridges more or less sinuate and irregular; its length about equal to its width across the middle. Elytra long, narrowed gradually and very slightly from the base for about four-fifths of their length and then more strongly; each truncate at the apex and armed with a short sutural spine. Femora nearly parallel-sided, the hind pair not reaching to the apex of the elytra in the ♂. First joint of the hind tarsi about equal in length to the second and third united. Intercoxal process of prosternum subvertical and very feebly tuberculate posteriorly.

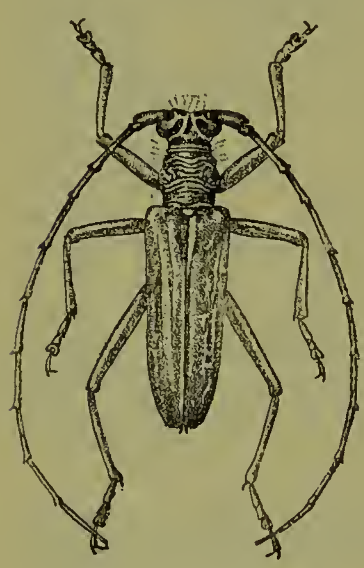


Fig. 52.—*Pachydissus parvicollis*, Gahan, ♂.

Length 30–32; *breadth* 8–8½ mm.

Hab. Northern India.

Genus **DEROLUS.**

Derolus, *Gahan, A. M. N. H.* (6) vii p. 26 (1891).
Capnocerambyx, *Reitter, Ent. Nachr.* xx, p. 356 (1894).

Type, *D. mauritanicus*, Buquet.
Range. Mediterranean Subregion; Africa and Oriental Regions.

Eyes large, emarginate, somewhat closely approximated above, not very widely separated below, extended under the antennal supports in front. Antennæ less than twice as long as the body in the ♂; first joint without cicatrix at the apex; third and fourth slightly nodose at the apex, the fifth to tenth angulate anteriorly at the apex, the fourth distinctly shorter than the third. Prothorax transverse; rounded at the middle of each side, usually more or less wrinkled above, and with a rather deep nitid groove with sharp edges curving downwards on each side behind the middle. Elytra truncate or subtruncate, sometimes rounded, at the apex. Femora with a fine carina on each side near the ventral face. Intercoxal process of prosternum subtruncate or tuberculate posteriorly. Acetabula of front coxæ very slightly or not at all angulate on the outer side, closed posteriorly; those of the middle coxæ narrowly open to the epimera, partly shut off by a small process of the metasternum.

134. **Derolus mauritanicus**, *Buquet* (Hammaticherus), *Ann. Soc. Ent. Fr.* 1840, p. 295.
Hammaticherus nerii, *Erichs. Wagn. Reiss. in Alger.* iii, p. 188, pl. 8, fig. 11 (1841).
Cerambyx nerii, *Muls. Col. Fr.* ed. 2, *Longic.* p. 58 (1862).

Brownish black, the elytra often more or less distinctly brown; covered, except on the prothorax, with a fine and not very dense greyish pubescence; legs and antennæ brownish, faintly pubescent. Antennæ nearly twice as long as the body in the ♂, scarcely longer than it in the ♀; first joint densely rugulose-punctate; third and fourth slightly nodose at the apex, the third twice as long as the fourth and slightly shorter than the fifth. Prothorax somewhat glabrous above, marked with a transverse subsinuate groove near the base and another near the apex, the basal groove continuous at each side with a broader and deeper groove which runs obliquely downwards and then curves forwards past the middle; the pronotum, where it borders this groove, has a rather sharp and slightly projecting edge; the disc uneven, slightly raised along the middle and along each side and crossed by some undulating ridges which are sharper and more distinct near

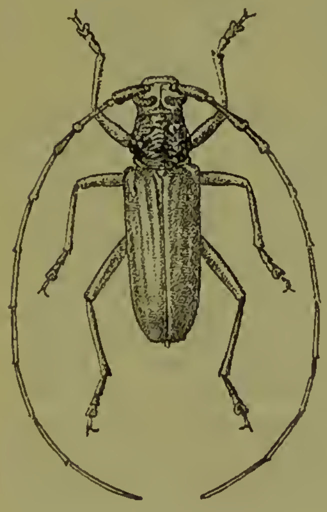


Fig. 53.—*Derolus mauritanicus*, Buq., ♂. × 6/5.

the base, where also they pass downwards on to the sides. Elytra nearly two and a half times longer than their width at the base; truncate at the apex, with the sutural angles subdentate; the surface densely but very finely punctulate.

Length 17–22; *breadth* $4\frac{1}{2}$–6 mm.

Hab. Baluchistan (*Indian Museum*), Ormarah (*W. D. Cumming*); Bushire (*W. D. Cumming*); Algeria; South Europe.

135. **Derolus discicollis**, sp. n.

Allied to *D. mauritanicus*, Buq., which it closely resembles in size, form, and coloration, but is readily distinguishable from it by the presence of a large, smooth, somewhat rounded area that occupies almost the whole disc of the prothorax. On each side of this distinctly limited space, the prothorax is uneven and rather densely covered with pale grey pubescence, a few short hairs of the same colour being scattered over the discal smooth area; near the base the prothorax is without striæ but is crossed by two grooves, the anterior one sinuate, the other directly transverse, both extended at each side into the deep oblique lateral groove, which is as broad posteriorly, and as sharply edged as in *D. mauritanicus*, but gets narrower as it reaches the middle of the side, where it joins a smooth depressed area lying just in front of the middle. Each elytron is rounded externally at the apex and armed with a short spine at the suture.

Length 18; *breadth* 5 mm.

Hab. Karachi (*F. W. Townsend*).

136. **Derolus demissus**, *Pascoe* (Cerambyx) *Trans. Ent. Soc.* (2) v. p. 21 (1859).
? Cerambyx volvulus, *Fab. Syst. Eleuth.* ii, p. 271 (1801).
Pachydissus (Derolus) demissus, *Gahan, A. M. N. H.* (6) vii, pp. 27 & 30 (1891).

Pitchy-brown, rather thinly covered with greyish pubescence. Eyes large, almost contiguous above in the male. Antennæ of the ♂ one-fifth or so longer than the body, those of the ♀ shorter; third and fourth joints feebly nodose at the apex, the fourth only a little shorter than the third. Prothorax rounded at the sides, transversely plicate above, occasionally nearly smooth on the middle of the disc; with a narrow, glabrous, and smooth excised area on each side. Elytra minutely and densely punctulate, the pubescence rather thin, each elytron subtruncate and unarmed at the apex. Metasternum with a small but distinct process projecting forwards at each of the antero-lateral angles, these processes partly but not completely shut off the epimera from the acetabula of the middle coxæ.

Length 15–17; *breadth* 4–$4\frac{1}{2}$ mm.

Hab. India: Benares, Sylhet, Tranquebar, Nilghiris; Philippine Islands; China.

Genus MARGITES.

Margites, *Gahan, A. M. N. H.* (6) vii, p. 26 (1891).

Type, *M. egenus*, Pasc., a species from China.

Range. India, Burma, China, West Africa, and East Africa extending as far south as Natal.

Head rather short; eyes large, extended anteriorly past the condyles of the antennæ; genæ short. Antennæ longer than the body in the ♂, with the third and fourth joints thickened, especially towards the apex; a little shorter than the body in the ♀; joints sixth to tenth compressed anteriorly and angulate at the apex. Prothorax rounded or obtusely subangulate at the middle of each side, narrowed at base and apex, not longer than its width across the middle, usually corrugate above. Elytra rounded or subtruncate at the apex. Legs moderately long; the femora fusiform-cylindric, slightly compressed, not carinate; the tibiæ in some forms finely carinate on each side near the ventral face; first joint of the hind tarsus shorter than the next two joints united. Acetabula of front coxæ rounded on the underside, closed posteriorly; the intercoxal process more or less gradually sloped, dilated towards the end.

137. Margites exiguus, *Gahan* (Pachydissus-Margites), *Ann. Mus. Civ. Gen.* xxxiv, p. 10 (1894).

Dark brown, the legs and antennæ slightly reddish, the head and prothorax nearly black, rather faintly covered with short grey pubescence. Head densely and rather finely punctured, impressed above with a feeble median line. Antennæ a little longer than the body in the ♂, shorter than the body in the ♀; third and fourth joints slightly thickened towards the apex; the third distinctly longer than the fourth, but scarcely longer than the fifth. Prothorax marked with a transverse or slightly bisinuate groove near the apex, and two grooves near the base; obtusely subangulate at the middle and feebly protuberant on each side just behind the anterior groove; the dorsal surface between the apical and basal grooves intricately but not very strongly rugose, and very sparsely pubescent; the narrow transverse area between the apical groove and the front margin densely and finely punctulate; the sides densely punctulate and rather closely covered with pubescence. Elytra rounded and unarmed at the apex; very densely and finely punctulate, somewhat less finely punctulate near the base. Femora finely and very densely rugulose-punctate; tibiæ finely carinate along each side close to the ventral face.

Fig. 54.—*Margites exiguus*, Gahan. × $\frac{5}{3}$.

Length, ♂ type 11; ♀ 16 mm.

Hab. Pegu: Tharawaddy (*Corbett*); Mandalay (*Fea*).

138. **Margites modicus**, sp. n.

Dark brown, the head and prothorax nearly black, the antennæ and legs reddish brown; faintly covered with short grey pubescence. Head densely and rather finely punctured; without impressed line above. Antennæ almost as long as the body in the ♀, and about one-fourth longer in the ♂; third and fourth joints rather strongly thickened towards the apex in the ♂, slightly thickened in the ♀. Prothorax evenly rounded at the sides, narrowed and feebly marked with transverse grooves at the base and apex; the whole of the dorsal surface almost bare of pubescence, and covered thickly with short irregular ridges, that give it a somewhat coarsely granulated appearance; the sides also rugose, but covered somewhat thinly with pubescence. Elytra finely and very densely punctate, the punctures somewhat stronger on the basal area; apices rounded. Femora finely and very densely punctate; tibiæ carinate. There is considerable resemblance in colour and structure between this species and *M. exiguus*, Gahan, but a clearly marked difference in the form of the prothorax, which is more or less regularly rounded at the sides in the one, and obtusely subangulate in the other; in the present species also the rugosity of the pronotum extends nearly up to the front and hind margins, whereas in *M. exiguus* it is confined to the area lying between the anterior and posterior transverse grooves.

Length 13–17; *breadth* $3\frac{3}{4}$–5 mm.

Hab. Nilgiri Hills; Bombay; Visapor.

139. **Margites sulcicollis**, *Gahan, A. M. N. H.* (6) xi, p. 378 (1893).

Head and prothorax black, sparsely setose; elytra brown, covered with greyish tawny pubescence, with some longer suberect tawny setæ interspersed; body beneath, legs, and antennæ piceous or black, faintly covered with grey pubescence. Antennæ shorter than the body in the ♀; first, third and fifth joints subequal in length, each longer than the fourth and slightly shorter than the sixth and succeeding joints. Prothorax constricted and transversely grooved near base and apex; rather strongly rounded in the middle on each side; the disc with two very distinct longitudinal, slightly curved grooves, which mark off a median suboblong area from two lateral areas, each of which is traversed longitudinally by three or four narrow grooves separated from each other by sharp, cariniform intervals; the median area sparsely punctate and feebly subsulcate along the middle. Elytra rounded at the apex, very finely and densely punctulate, with also sparser, larger sized punctures from which the suberect setæ arise. Femora densely and finely rugulose-punctate; the tibiæ not carinate.

Length 13; *breadth* $3\frac{1}{2}$ mm.

Hab. Burma: Paungdé (*Corbett*); North Chin Hills (*Watson*).

Genus DYMASIUS.

Dymasius, *Thoms. Syst. Ceramb.* p. 234 (1864).
Elydnus, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 516 (1869).

Type, *D. macilentus*, Pasc.
Range. Oriental Region.

Somewhat elongate in form. The antennæ of the males vary in length; they are more than twice as long as the body in the type species, and only one-fourth or so longer than the body in other species; third and fourth joints subequal, each distinctly longer than the fourth; third and fourth more or less nodose at the apex: antennæ of the females slightly longer or shorter than the body; fifth joint shorter than the third and longer than the fourth; sixth to tenth more angulate anteriorly at the apex than in the male. Prothorax longer than broad, constricted near the apex and to a less extent at the base, slightly rounded in the middle on each side; the disc usually rugose or corrugate. Elytra rather long, truncate at the apex and usually armed each with one or two spines. Legs moderately long; the femora only slightly thickened at the middle, exceptionally they are feebly carinate along each side. First joint of hind tarsus as long, or nearly so, as the next two joints united. Acetabula of front coxæ closed; the intercoxal process usually subvertical, and somewhat tuberculate posteriorly.

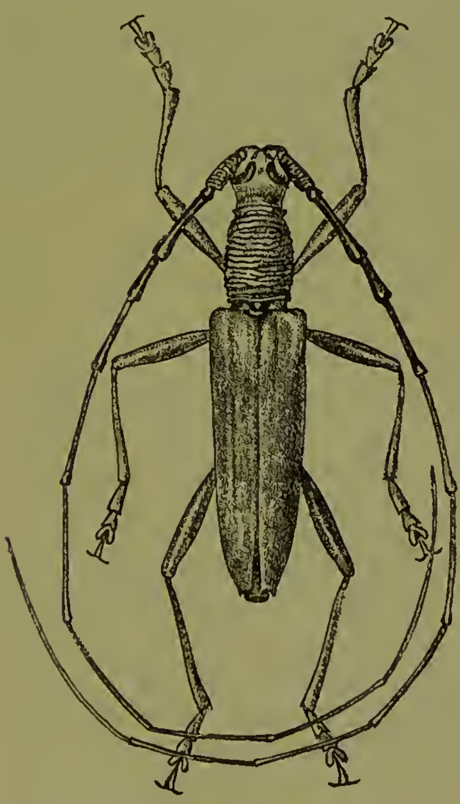


Fig. 55.—*Dymasius macilentus*, Pasc., ♂. × $\frac{6}{5}$.

140. **Dymasius macilentus**, *Pascoe* (Cerambyx), *Trans. Ent. Soc.* (2) v, p. 20 (1859).
Dymasius strigosus, *Thoms. Syst. Ceramb.* p. 234 (1864).

Dark brown with a rather dense covering of silky-grey pubescence, which is so arranged on the elytra as to give the appearance of a number of longitudinal bands or spots varying in brilliancy according to the direction of the light falling on them; three or four longitudinal streaks on each elytron moreover are almost bare of pubescence, and under the lens are seen to be very closely punctate with fine unequal-sized punctures. Upper lobes of the eyes rather closely approximate above; the vertex of the head just behind and partly between them marked with a feeble groove. Prothorax rather strongly wrinkled across the whole of the upper

surface except in front of the anterior constriction. Elytra slightly flattened above, with some faint broad longitudinal grooves; the outer spine at the apex of each longer than the inner one.

Length 23–35; *breadth* 5–8 mm.

Hab. Ceylon.

141. **Dymasius fulvescens,** *Gahan, Ann. Mus. Civ. Genov.* xxxiv, p. 11, pl. 1, fig. 2 (1894).

Dark brown; with the greater part of the head, the front border, some anterior spots on the disc of the prothorax, the scutellum and elytra densely covered with dull fulvous pubescence; the antennæ, legs and underside with a faint covering of grey pubescence. Head marked in front with a naked subcircular impression that limits a slightly raised central area; the shallow groove lying between the antennal supports also bare of pubescence. The antennæ are slightly longer than the body in the ♀, and extend past the apex of the elytra by their last two or three joints in the ♂; third and fourth joints only slightly thickened at the apex, the third nearly twice as long as the fourth; fifth to tenth sharply angulate or subspinose at the apex, each subequal in length to the third; eleventh little longer than the tenth. Prothorax longer than broad, slightly rounded at the sides, narrowed more in front than towards the base; intricately and rather strongly rugose above and at the sides. Elytra gradually narrowed backwards, truncate at the apex and armed each with a sutural spine. Femora rather slender, but slightly thickened towards the middle; tibiæ not carinate; first joint of hind tarsus as long as the next two joints united.

Length 19–21; *breadth* 4–4½ mm.

Hab. Burma: Karennee (*Fea* and *Doherty*).

142. **Dymasius minor,** sp. n.

Narrow and elongate, dark brown, covered with a silky grey pubescence which on the elytra is interrupted by a few longitudinal, subnude, finely punctulate streaks; antennæ and legs reddish brown with a faint grey pubescence. Head marked with a feeble median sulcus on the vertex just behind the eyes. Antennæ of the ♂ about one-fourth longer than the body; third, fourth and fifth joints thickened strongly at the apex; fourth and fifth subequal in length, together not much longer than the third, and only very slightly longer than the sixth or seventh; eighth to eleventh gradually shorter. Prothorax much longer than broad, slightly rounded at the sides, rugose above, with the pubescence disposed in patches, one of which lies along a median space on the posterior half; constricted and transversely grooved near the apex and marked with two transverse grooves near the base. Elytra nearly three times as long as broad, narrowly truncate at the apex; each with a shallow

longitudinal depression on the basal half of the disc and another further back placed more towards the side. Femora finely carinate anteriorly and posteriorly. Intercoxal process of prosternum gradually sloped posteriorly and furnished close to its apex with two minute tubercles.

Length 9–10; *breadth* 2 mm.

Hab. Southern India: Nilgiri Hills (*H. L. Andrewes*).

143. **Dymasius plagiatus**, sp. n.

Reddish brown, with the prothorax and elytra dark brown; the head, prothorax and greater part of the elytra rather densely covered with yellowish-tawny pubescence; antennæ and legs reddish, very faintly covered with pale grey pubescence. Antennæ about one-third longer than the body in the ♂, a little longer than the body in the ♀; first joint densely punctate; third and fourth subnodose at the apex in the ♂, the third twice as long as the fourth and only slightly shorter than the fifth; the fourth slightly shorter than the first; fifth to tenth acutely angulate at the apex on the anterior side. Prothorax subcylindrical, nearly one-third longer than broad, feebly constricted at the apex. Elytra narrowed and rounded at the apex; each with a rather broad, shallow furrow or depression running straight back along the outer part of the disc from the base to the middle and then obliquely towards the suture, this oblique part of the furrow, bare of pubescence, sparsely punctate and dark brown in colour; on each elytron there is also an elongated, subsutural, glabrous area near the base which is closely and rather strongly punctured; the outer border for a short distance from the apex also subnude and brownish in colour. Abdomen reddish brown, thinly covered with grey pubescence. Femora gradually and slightly widened from the base to within a short distance of the apex; femora and tibiæ with a fine carina along each side; first joint of the hind tarsi about equal in length to the second and third united. Intercoxal process of the prosternum gradually sloped posteriorly.

Length 10–12; *breadth* 2–2¼ mm.

Hab. Burma: Karen Mts. (*Doherty*).

Genus DIALEGES.

Dialeges, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 46 (1856); *Lacord. Gen. Coléopt.* viii, p. 263 (1869).

Type, *D. pauper*, Pasc.

Range. Ceylon, Burma, Siam, Malay Peninsula and Archipelago.

Head more or less elongated behind the eyes, with a fine median groove that extends from the clypeus to the occiput; the antennal supports depressed; the front oblique; the eyes divided each into two lobes or else deeply emarginate, the lower lobes not reaching beyond the antennal supports in front. Antennæ much longer than the body in the male, thinly fringed with hairs beneath;

first joint rather long, subcylindrical; third slightly curved, longer than the fourth; third to fifth slightly nodose at the apex: antennæ of female scarcely longer than the body, and not fringed with hairs beneath. Prothorax longer than broad in the male, constricted near base and apex; feebly convex above and crossed by fine transverse ridges. Elytra long, feebly convex above, gradually narrowed posteriorly, truncate or rounded at the apex. Legs long; femora compressed, the hind pair extend a little past the apex of the elytra in the male and not quite to the apex in the female; first joint of the middle and hind tarsi as long at least as the next two joints united. Prosternal process vertically deflexed posteriorly.

I. *Eyes divided; third antennal joint much longer than fifth.*

144. **Dialeges pauper**, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 47, pl. 16, fig. 7 (1856); *id. ibid.* (3) iii, p. 521.
Dialeges tenuicornis, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 522 (1869), ♀.

Varies from reddish brown to dark brown in the colour of the derm; rather densely covered with greyish-brown silky pubescence, the pronotum, however, with a few longitudinal depressions almost bare of pubescence; the pubescence on the elytra somewhat denser and so disposed as to present short ill-defined longitudinal bands or patches of lighter or darker shades according to the incidence of the light; these in certain lights give silvery reflexions; two closely approximated bands placed a little behind the middle of each elytron are darker in colour than the rest. Head elongated posteriorly; clypeo-frontal sutures distinct; genæ short; eyes completely divided, gula transversely ridged. Antennæ one-third or more longer than the body in the ♂, about one-sixth longer than the body in the ♀; second joint as broad as it is long; third nearly (sometimes quite) as long as the fourth and fifth united; fourth slightly shorter than the fifth; fourth to eighth and apex of third fringed beneath with hairs in the ♂. Prothorax somewhat narrowed before and behind, longer than its width across the middle in the ♂, shorter in the ♀; transversely but irregularly wrinkled above and marked with some longitudinal or oblique depressions. Elytra truncate at the apex, armed each with a short spine at the suture and tooth at the outer angle. Femora stout in the ♂, widest between the middle and base, gradually narrowed towards the apex, anterior two pairs rugulose in ♂, all finely punctulate; hind tarsus narrow, the first joint much longer than the next two united.

Length 16–31; *breadth* 3½–8 mm.

Hab. Allahabad; Darjeeling; Assam: Patkai Mts. (*Doherty*); Perak; Penang; Singapore; Borneo.

II. *Eyes emarginate; third antennal joint shorter than fifth.*

145. **Dialeges undulatus**, *Gahan, A. M. N. H.* (6) vii, p. 23 (1891).

Pitchy brown, varying on the elytra to reddish brown in the colour of the derm; a covering of greyish pubescence, which is denser and more glossy on the elytra, there also with broad patches or bands of varying shades, like watered silk, according to the incidence of the light. Head slightly elongated behind the eyes; the latter deeply emarginate in front, not divided as they are in the type species. Antennæ of the male twice as long as the body, fringed with hairs under the third and succeeding joints; third joint shorter than the fifth; fifth to seventh subequal; eighth to tenth gradually diminishing in length, and united scarcely longer than the eleventh; antennæ of the female a little longer than the body, with the eleventh joint very little longer than the tenth. Prothorax longer than broad in both sexes, slightly rounded on each side, constricted at the base and apex; transversely and not very strongly wrinkled above, with a line or band bare of pubescence along the middle. Elytra conjointly rounded and unarmed at the apex.

Fig. 56.—*Dialeges undulatus*, Gahan. × $\frac{6}{5}$.

This species, though it has a strong resemblance in shape and coloration to *D. pauper*, Pasc., the type of the genus, is easily distinguished from it by the following well-marked structural characters:—the head less elongated behind the eyes; the eyes not divided; the third joint of the antennæ shorter than the fifth; the elytra rounded and unarmed at the apex.

Length 16–21; *breadth* $3\frac{1}{4}$–5 mm.

Hab. Ceylon; Burma; Siam.

Genus SEBASMIA.

Sebasmia, *Pascoe, Trans. Ent. Soc.* (2) v, p. 18 (1859); *Lacord. Gen. Coléopt.* viii, p. 272 (1869).

Type, *S. templetoni*, Pasc.

Range. Ceylon and Southern India.

Eyes large, emarginate, closely approximate above and not very widely separated on the ventral side of the head; genæ short. Antennæ about one-fourth longer than the body in the ♂; third and fourth joints slightly thickened at the apex, third about one-fourth longer than the fourth and shorter than the fifth; fifth to tenth compressed and sharply angulate in front at the apex. Prothorax longer than broad, narrowed anteriorly from the middle,

rugose above. Elytra long, somewhat parallel-sided, broadly truncate at the apex. Legs rather short; femora thickened below the middle, the middle pair more so than the others in the ♂ of the typical species, and in these also furnished beneath with a large, elongate, piligerous pit; hind femora scarcely extended past the hind border of the second abdominal segment in the ♂. Acetabula of front coxæ rounded on the outer side, closed posteriorly; the intercoxal process gradually sloped and dilated posteriorly. Abdomen parallel-sided, broadly rounded posteriorly, the last ventral segment of the ♂ with a feeble sinuate emargination at the apex.

146. **Sebasmia templetoni**, *Pascoe, Trans. Ent. Soc.* (2) v, p. 19 (1859).

Piceous black, densely clothed above with a slightly silky pubescence of a fulvous yellow colour; the pronotum, however, in part glabrous; the elytra also each with two nude, impunctate, polished spots, one a short distance along each side from the base, the other placed on the disc a little in front of the apex. Antennæ dark brown, the first two joints covered like the front of the head with rust-coloured pubescence. Prothorax narrowed anteriorly from about the middle, and continuing as wide up to the base as at the middle, irregularly rugose above, with a short cariniform elevation along the middle. Elytra very slightly widened posteriorly, their greatest width a little before the apex, broadly truncate at the apex with the angles acute or subdentate. Body beneath, femora and tibiæ piceous; the tarsi with a rusty-red pubescence. Middle femora of ♂ thicker than the others, and furnished beneath with an elongate-oval pit covered with reddish hairs.

Fig. 57.—*Sebasmia templetoni*, Pasc., ♂.

Length 29; *breadth* 6 mm.

Hab. Ceylon.

147. **Sebasmia testacea**, sp. n.

Testaceous red; the front and vertex of the head densely, the pronotum less densely clothed with yellowish-grey pubescence; elytra more faintly covered with a short, yellowish-grey, silky pubescence. Antennæ a little longer than the body; first joint very closely rugulose-punctate; third and fifth to ninth subequal in length, each about one-third longer than the fourth; eleventh one-third longer than the tenth. Prothorax conico-cylindric, about one-third longer than its width at the base, somewhat transversely rugose, this rugosity most noticeable at the

sides, which are almost bare of pubescence; the disc with a short median carina and two small spots before the middle, bare of pubescence. Elytra a little wider at the base than the base of the prothorax, gradually but very slightly wider posteriorly and attain their greatest width a little before the apex; apices broadly truncate, with a stronger outer and shorter sutural tooth; the disc of each with a broad obtuse costa that runs along it in a slightly oblique direction, near the shoulder in front and near the suture posteriorly. The body beneath, coloured like the upperside, is faintly pubescent; the metathoracic episterna are long and rather narrow, parallel-sided in the anterior four-fifths of their length and narrowed posteriorly. The abdomen is as broad behind as in front, with the last ventral segment somewhat sinuate at the apex.

Length 16; *breadth* 3 mm.

Hab. Ceylon.

148. **Sebasmia nigra**, sp. n.

♂. Long and narrow. Entirely black, with a short ashy-grey pubescence that covers the body beneath, the legs and the greater part of the antennæ, and is faintly visible on the upperside. Head finely rugulose-punctate, with a somewhat granulate appearance above. Antennæ a little longer than the body; first joint closely and finely punctured, marked with a narrow cicatrix and carina at the apex; third about one-third longer than the first or fourth; fifth to tenth subequal in length to the third; each denticulately produced at the apex in front; eleventh a little longer than the tenth. Prothorax subcylindrical, much longer than broad, slightly constricted and marked with a transverse groove near the apex, transversely and rather finely wrinkled over the whole of the upper surface. Elytra parallel-sided, narrowed and truncate at the apex, finely and very closely punctured throughout, but somewhat less finely near the base. Hind femora extend a little beyond the hind margin of the second abdominal segment; first joint of hind tarsus as long as the next two united.

Length 14; *breadth* $2\frac{1}{2}$ mm.

Hab. Nilgiri Hills (*H. L. Andrewes*).

Genus TRACHYLOPHUS.

Trachylophus, *Gahan, A. M. N. H.* (6) ii, p. 59 (1888).

Type, *T. sinensis*, Gahan.

Range. South China, Burma, and Java.

Head with the antennal supports somewhat depressed and separated by a narrow groove, the vertex impressed with a median groove. Antennæ about equal in length to the body in the ♀ and only a little longer in the ♂; third and fourth joints cylindrical, scarcely thickened at the apex, the fourth much shorter than the third; fifth longer than the third, cylindrical at base, compressed

and angulated anteriorly at the apex; sixth to tenth subequal, compressed, each angulate anteriorly at the apex; eleventh in the ♂ a little longer, in the ♀ scarcely longer, than the tenth. Prothorax broader than long, dilated on each side in the middle, narrowed in front, strongly rugose above. Elytra long, with the sides subparallel. Legs moderately long, with the femora sublinear, the hind pair scarcely extended past the third abdominal segment. Prosternum vertical posteriorly and furnished there with a median keel or tubercle.

149. **Trachylophus sinensis**, *Gahan, A. M. N. H.* (6) ii, p. 60 (1888).

Dark brown, rather densely covered all over with a somewhat silky pubescence of a uniform greyish or yellowish-grey colour. Head impressed with a short median groove above between the eyes. Prothorax strongly corrugate above, most of the ridges intricately convoluted, a few only near the middle take a longitudinal course; two of these, separated posteriorly by a median furrow, diverge slightly as they run up to the middle, and then converge and meet a little in front of it, separating again near the apex. Elytra truncated in a slightly oblique direction at the apex and armed each with a very short sutural spine; the surface very minutely and densely punctulate. Intercoxal process of the prosternum moderately broad, with a feeble median carina, which ends posteriorly in a more or less prominent posteriorly directed tubercle.

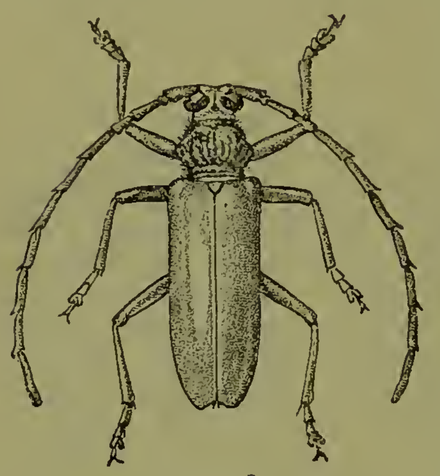


Fig. 58.
Trachylophus sinensis, Gahan.

Length 25–38 mm.

Hab. Burma: Karen Hills (*Fea*); South China (*Bowring*).

Genus RHYTIDODERA.

Rhytidodera, *White, Cat. Col. B. M., Longic.* p. 132 (1853); *Lacord. Gen. Coléopt.* viii, p. 268 (1869).

Type, *R. bowringii*, White, a species from China.

Range. India, China, Burma, Siam, and Malay Peninsula.

Eyes rather closely approximated above, reaching nearly to a line with the antennal condyles in front. Antennæ of ♂ shorter than the body in most species, a little longer in some; first joint rather short, not reaching to front margin of prothorax; third longer than the fourth; fifth to tenth, and exceptionally the third and fourth, compressed in front and more or less sharply angulate at the apex; antennæ of ♀ shorter and less robust, with the joints

less sharply angulate at the apex. Prothorax rugose, rounded at the sides, constricted and transversely grooved near base and apex. Elytra more or less parallel-sided, obliquely truncate or subtruncate at the apex and armed or not with teeth or spines. Acetabula of front coxæ feebly or not at all angulate on the outer side, closed posteriorly; intercoxal process raised and rather narrow in the middle, gradually sloped and expanded towards the end. Legs moderately long; the hind femora hardly extended past the third abdominal segment in the ♂ and the second in the ♀; first joint of hind tarsus shorter than the next two united.

In most species of this genus, including all the Indian ones, the pubescence on the elytra is somewhat characteristic in its colour and distribution: it is partly tawny, partly grey, sparser on some parts and condensed on others, with a tendency to form more or less regular longitudinal or transverse series of linear, oblong or quadrate spots.

150. **Rhytidodera robusta,** *Gahan, A. M. N. H.* (6) vii, p. 34 (1891).

♀. Dark brown, with the elytra reddish brown; head and prothorax rather densely covered with tawny pubescence; elytra with a mixed pubescence, partly tawny and partly ashy-grey in colour, denser on some parts, sparser on others; the grey pubescence forms series of ill-defined oblong or quadrate spots on the disc, and is more irregularly diffused on the sides. Head with a slightly raised median carina on the vertex. Antennæ robust, extended very little past the middle of the elytra; first joint not reaching past the hind border of the eye; third and fourth thickened and subnodose at the apex; third longer than the fourth, but scarcely as long as the first; fifth to tenth compressed in front and angulate at the apex. Prothorax marked with two transverse grooves near the apex, and a strongly sinuous groove near the base; the disc and sides very strongly and irregularly rugose; each side with an irregular tubercle close to the front margin, the disc with two just before the middle; the tops of the ridges and tubercles glabrous and nitid. Elytra rounded externally at the apex; each subsinuate near the suture, armed at the suture with a distinct spine; the apical margin obscured by a fringe of tawny hairs. Body beneath and legs covered with pubescence of a prevailing yellowish-white tint, but more or less distinctly tawny in places. Hind femora not extending past the hind border of the second abdominal segment.

Fig. 59.—*Rhytidodera robusta*, Gahan. × $\frac{4}{5}$.

Length 31–34; *breadth* 8–9 mm.

Hab. Bombay; Bangalore.

151. **Rhytidodera simulans**, *White* (Hammaticherus?), *Cat. Col. B. M., Longic.* p. 132 (1853).

Varies from reddish brown to brownish black in colour; head and prothorax sparsely covered with tawny pubescence; elytra with tawny or ashy-grey pubescence, or with pubescence which is partly ashy-grey and partly tawny, somewhat variable in its distribution, but with a marked tendency to arrangement in longitudinal series of sublinear spots; body beneath, legs, and antennæ entirely covered with tawny or grey pubescence. Antennæ extended to the posterior third of the elytra in the ♂ and to their middle in the ♀; first joint reaching to a little past the hind margin of the eye; fifth to tenth angulate anteriorly at the apex. Prothorax a little longer than broad, strongly and irregularly rugose above and at the sides, marked with a transverse groove near the apex and a bisinuate groove near the base; the disc with scattered patches of tawny pubescence. Elytra densely punctate; each truncate at the apex, with the outer angle acute or subdentate, the sutural angle spined.

Length 20–31; *breadth* 5–8 mm.

Hab. Tenasserim; Malay Peninsula; Borneo; Ceram.

152. **Rhytidodera integra**, *Kolbe, Archiv für Naturg.* iii, 1, p. 237 (1886).
? Zatrephus nebulosus, *Brongn. Nouv. Archiv. du Mus.* (3) iii, p. 240, pl. 10, fig. 2 (1891).

Very like *R. simulans*, White, in general appearance, but distinguishable from it by the following characters:—Elytra generally rounded, sometimes subtruncate, at the apex, but without external tooth or angle, and with only a very short spine at the suture. Pronotum somewhat less strongly rugose and less sparsely pubescent than in *R. simulans*, its length scarcely greater than its width across the middle.

Length 20–27½; *breadth* 5–7 mm.

Hab. Burma. Korea; China; Siam; Singapore.

Genus XOANODERA.

Xoanodera, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 92 (1857); *Lacord. Gen. Coléopt.* viii, p. 269 (1869).

Type, *X. trigona*, Pascoe.

Range. Ceylon, S. India, Burma, Malay Peninsula, and Borneo.

Eyes large, deeply emarginate, not extending to a line with the antennal condyles in front, rather closely approximated above, with the narrow space between them marked with a feeble median carina. Antennæ scarcely or not at all longer than the body in the ♀, a little longer in the ♂; fifth to tenth joints sharply edged in front and acutely angulated at the apex; eleventh only a little longer than the tenth. Prothorax strongly rugose, a little longer than broad, rounded at the sides, constricted and transversely

grooved near base and apex. Elytra parallel-sided, narrowed near the apex; each with a posterior submarginal carina, with the apex truncate and more or less distinctly bidentate. Prosternum raised between the coxæ, sharply deflexed posteriorly, and dilated at the end so as to almost meet the epimera. Acetabula of front coxæ not angulated outwards. Legs moderately long; femora carinate on each side near their lower portions; first joint of hind tarsus shorter than the next two united.

The most distinctive of these characters is the presence of a submarginal carina on the posterior part of each elytron. The three species included in the present fauna are all characterized by the presence of a very strongly and closely punctured dark brown lateral area that extends from the base to a greater or less extent past the middle of each elytron.

I. *Elytra with glabrous dark brown streaks posteriorly.*

153. **Xoanodera trigona**, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 92, pl. 23, fig. 1 (1857); *id.* (3) iii, p. 527 (1869); *Lacord. Gen. Coléopt., Atlas*, pl. 85, fig. 1 (not a good figure).

Dark brown; with a yellowish-white pubescence that covers the head, the sides of the prothorax, and a considerable part of the elytra; the latter each with a large, glabrous, very strongly punctured dark brown area at the side that extends from the base to the posterior third and spreads more than halfway across the elytron near the middle of its length, there are also four or five longitudinal glabrous streaks between this area and the apex and a few also near the base; antennæ, legs, and underside covered with greyish or tawny-grey pubescence. The antennæ extend past the apex of the elytra by about their last joint in the ♀ and their last two in the ♂; third joint very slightly longer than the first and about one-third longer than the fourth; fifth to tenth strongly and sharply angulate or subdentate at the apex on the anterior side, eleventh a little longer than the tenth, shortly appendiculate. Prothorax rounded, rugose and pubescent at the sides; glabrous above, furnished with a variable number of sharp longitudinal costæ. (In the type from Singapore there are about ten costæ, four of which are straight and very sharply defined, the others placed more towards the sides, slightly curved and somewhat irregular; in two specimens from Mergui there are only two longitudinal costæ, the disc of the prothorax between them and the sides irregularly and somewhat intricately rugose.) Elytra very strongly punctured, with the punctures larger and very closely placed on the large dark brown areas at the sides and also near the base, smaller and less dense on the glabrous streaks near the apex; the submarginal carina of each elytron near the apex very distinct; the apex of each rather strongly bidentate.

Length 20–24; *breadth* 5–6 mm.

Hab. Tenasserim: Mergui (*Doherty*); Malay Peninsula: Penang; Dinding Is.; Singapore.

II. *Elytra without glabrous dark brown streaks posteriorly.*

A. *Prothorax irregularly rugose, without longitudinal costa above.*

154. **Xoanodera amœna,** *Pascoe, A. M. N. H.* (5) xv, p. 53 (1885).

Dark brown to brownish black in colour; the elytra covered for the greater part with a dense yellowish-white pubescence, each with a basal spot close to the scutellum and a lateral plaga that extends from the shoulder to a little past the middle, deeply and very strongly punctured and bare of pubescence, the narrow border between the submarginal carina and the outer margin sparsely pubescent. Head and first antennal joint closely rugulose-punctate. Antennæ reddish brown, with a faint covering of grey pubescence. Prothorax strongly and irregularly rugose, scantily clothed with patches of tawny pubescence, unevenly rounded at the sides, marked near the apex with one and at the base with two transverse grooves. Elytra each feebly bidentate at the apex. Breast and abdomen rather densely, the legs less densely, covered with greyish-white pubescence.

Length 15–19½; *breadth* 4½–5 mm.

Hab. Ceylon; S. India: Trivandrum, Kanara, Anaimalai and Nilgiri Hills.

B. *Prothorax with four or more straight longitudinal costæ above.*

155. **Xoanodera regularis,** *Gahan, A. M. N. H.* (6) v, p. 52 (1890).
? Xoanodera pascoei, *Brongn. Nouv. Archiv. du Mus.* (3) iii, p. 239 (1891).

Fig. 60.
Xoanodera regularis, Gahan. × ⅞.

Very like *X. amœna*, Pasc., but generally of a much darker brown or almost black colour, and readily distinguishable from that species by the four or more straight, sharp longitudinal ridges on the disc of the prothorax and a rather dense covering of yellowish-white pubescence on the sides. In other respects it agrees closely in structure with *X. amœna*, while the puncturation and markings of the elytra are almost identical.

Length 17–21; *breadth* 5–6 mm.

Hab. N. India?; Burma: Ruby Mines; Karenee (*Doherty*); Tenasserim: Thagata (*Fea*); Tavoy (*Doherty*).

Group *PHORACANTHINI.*

Eyes large, deeply emarginate. Antennæ spined posteriorly at the apex of some of the joints. Front coxæ globular, their acetabula rounded on the outer side, open or closed posteriorly. Acetabula of middle coxæ not extending to the epimera. Metasternum usually provided with scent-pores.

Most of the genera belonging to this group are found in Australia and America. Two only are included in the Indian fauna, and one of these (*Nyphasia*, Pasc.) is very closely related to *Cordylomera*, Serv., the only genus of the group which occurs in Africa.

Synopsis of Genera.

A. Acetabula of front coxæ closed posteriorly .... NYPHASIA, p. 151.
B. Acetabula of front coxæ open posteriorly...... NYSINA, p. 153.

Genus NYPHASIA.

Nyphasia, *Pascoe, A. M. N. H.* (3) xix, p. 313 (1867); *Lacord. Gen. Coléopt.* viii, p. 308 (1869).

Type, *N. torrida*, Pascoe.

Range. India, Ceylon, Burma, and Siam.

Head with the front subvertical, transverse, limited below by well-marked sutural lines; antenniferous tubercles formed into an obtuse ridge, slightly concave from side to side between the antennæ; palpi rather short, with the last joint subcylindrical; outer lobe of maxillæ elongate, with a brush-like end; eyes deeply emarginate, with the upper lobes rather narrow. Antennæ longer than the body, with joints three to six or seven acutely spined posteriorly at the apex; first joint clavate, slightly curved; third longer than the fourth and slightly shorter than the fifth. Prothorax as long as it is broad, with two or three feeble obtuse tubercles on each side; slightly depressed above and marked with a transverse groove near the apex and another near the base; its front margin somewhat sharply rounded in the middle. Scutellum posteriorly acuminate. Elytra slightly narrowed backwards; each sharply rounded or subacuminate at the apex and sometimes armed with a spine. Legs moderately long, the hind pair distinctly the longest; femora pedunculate with an oval thickening before the apex; first joint of hind tarsus about equal in length to the next two united. Acetabula of front coxæ rounded on the outside; intercoxal process rather narrow in the middle, gradually sloped and widely dilated posteriorly, meeting the epimera behind the middle of the coxæ; acetabula of the middle coxæ shut off from the epimera by a prolongation of the antero-lateral angles of the metasternum. Metathorax with scent-pores placed near the suture which separates the epimera from the metasternum, not far from the hind angles of the latter.

I. *Elytra spined at the apex.*

156. **Nyphasia torrida,** *Pascoe, A. M. N. H.* (3) xix, p. 313 (1867).

♀. Reddish-testaceous; the antennæ, from the third joint, for the greater part black; the scutellum and the tips of the femora almost black; upperside dull; body beneath, legs and antennæ more or less glossy. Head and prothorax finely and very closely punctured; the latter with a very feeble obtuse tubercle just before the middle of each side and another between it and the front margin. Scutellum somewhat prolonged at the apex. Elytra distinctly but not very closely punctured, each with a small, acute tubercle at the extreme base; apices subacuminate, armed with a short spine. Intercoxal process of the first abdominal segment obtusely pointed in front. Hind femora not extended as far as the apex of the elytra.

Length 14–19; *breadth* 4–5 mm.

Hab. Ceylon.

157. **Nyphasia apicalis,** *Gahan, A. M. N. H.* (6) xi, p. 378 (1893).

♂. Fulvous red; the elytra for a short distance from the apex violaceous blue; the third to the sixth joints of the antennæ black, the succeeding joints more or less dark brown. Antennæ nearly one-third longer than the body. Head and prothorax finely and very closely punctured, the latter with an obtuse but rather strong tubercle near the middle of each side. Scutellum prolonged posteriorly. Elytra distinctly and not very closely punctured, each elytron furnished with a small acute tubercle at the extreme base, subacuminate at the apex and armed with a short sutural spine. Intercoxal process of abdomen rather acute in front.

Length 15 mm.

Hab. Southern India: Canara (*T. R. D. Bell*).

In general structure and puncturation this species agrees fairly well with *N. torrida*, Pasc., but has the prothorax somewhat more strongly tuberculate at the sides. The difference in the form of the intercoxal process of the abdomen is probably sexual and not specific. When writing my original description of this species, I was not acquainted with Pascoe's species except by description, and consequently gave a wrong impression in regard to its affinities.

II. *Elytra unarmed at the apex.*

158. **Nyphasia fuscipennis,** *Gahan, A. M. N. H.* (6) v, p. 53 (1890).

Fulvous red, with the elytra dull purplish brown that varies somewhat in tint according to the direction of the light; the antennæ and legs (the yellow peduncles of the femora excepted) piceous brown and in parts almost black; body beneath and legs glossy, upper surface opaque. Scutellum acute, but not prolonged, at the apex. Elytra sharply rounded and unarmed at the apex; each with a small sharp tubercle at the extreme base. Intercoxal process of abdomen somewhat obtusely pointed in front.

Length 14; *breadth* 3¼ mm.

Hab. Bombay.

159. **Nyphasia pascoei**, *Lacord. Gen. Coléopt.* viii, p. 309 (1869).

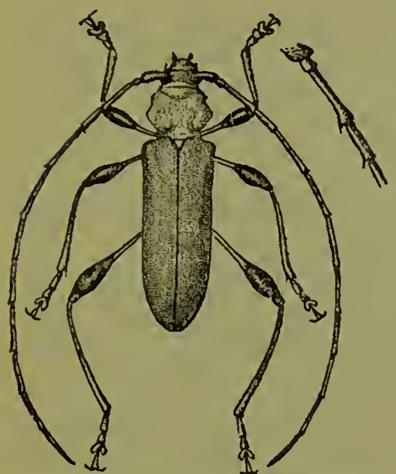


Fig. 61.—*Nyphasia pascoei*, Lacord., ♂. × 7/4.

Fulvous red, with the elytra green, the antennæ and legs (the stalks of the femora excepted) nearly black; body beneath and legs glossy, upper surface opaque. Scutellum acute, but not prolonged, at the apex. Elytra closely punctured, sharply rounded and unarmed at the apex, each with a small sharp tubercle at the extreme base.

Length 14–17; *breadth* $3\frac{1}{2}$–$4\frac{1}{2}$ mm.

Hab. Burma; Siam.

This species is very closely allied to *N. fuscipennis*; almost the only difference is in the colour of the elytra, which is distinctly green in the one, brown in the other.

Genus **NYSINA**, g. n.

Type, *N. orientalis*, White.

Range. Assam and Upper Burma.

Nearly allied to *Nyphasia*, Pasc., with which it agrees in the structure of the antennæ and legs; also, like that genus, it has the acetabula of the middle coxæ shut off from the epimera by a prolongation of the antero-lateral angles of the metasternum. It differs as follows:—Antennal supports separated by a moderately broad channel, so as not to form an almost continuous ridge between the antennæ. Prothorax distinctly longer than broad, the sides scarcely rounded and not at all tuberculate, the disc rugose-punctate. Elytra somewhat depressed along the middle, truncate at the apex. Intercoxal process of prosternum less dilated posteriorly, not meeting the epimera.

160. **Nysina orientalis**, *White* (Sphærion?), *Cat. Coleopt. B. M., Longic.* i, p. 110 (1853); *Lacord.* (Nyphasia?) *Gen. Coléopt.* viii, p. 309 (1869).

Testaceous red; antennæ, legs and sides of breast black; glossy above as well as beneath. Head slightly rugose above between the eyes, marked in front with oblique impressions which enclose a small triangular area. Antennæ much longer than the body in the ♂, a little longer than it in the ♀; third, fourth and fifth joints with a distinct posterior spine at the apex, third canaliculate above in the ♂. Prothorax about one-fourth longer than broad, a little narrower in front than at the base; the disc slightly depressed, rugosely punctured. Elytra densely punctate near the base, less densely posteriorly; the surface sparsely setose, and clothed with a faint pubescence; apices somewhat obliquely

truncate with the angles acute. Hind femora not reaching to the apex of the elytra in the female.

Length 12–17; *breadth* 3–4 mm.

Hab. Assam: Sylhet; Burma: Ruby Mines district (*Doherty*).

Group *CALLIDIOPSINI.*

Head not strongly exserted; eyes coarsely facetted, deeply emarginate, with anteriorly extended lower lobe; genæ short; gula with short mentigerous process; ligula membranous. Antennæ not spined, usually pubescent, often ciliated beneath, longer as a rule than the body in the ♂. Prothorax cylindric or ovate, sometimes more or less transverse; unarmed at the sides. Front coxæ globular; their acetabula rounded on the outer side, open posteriorly. Acetabula of middle coxæ not extended to epimera. Vein Cu 1 of hind wings usually bifurcate, Cu 2 absent.

Synopsis of Genera.

A. Prothorax broader than long, strongly rounded at the sides.
- a. Antennæ densely ciliated, third joint much longer than first .... GELONÆTHA, p. 154.
- b. Antennæ sparsely ciliated, third joint not longer than first .... TRINOPHYLUM, p. 155.

B. Prothorax longer than broad, slightly or not rounded at sides.
- a. Tibiæ not curved, not carinate on outer border.
  - *a'*. Fourth antennal joint shorter than first............................ CERESIUM, p. 156.
  - *b'*. Fourth antennal joint longer than first. SALPINIA, p. 163.
- b. Tibiæ curved, carinate on outer border . . STENYGRINUM, p. 164.

Genus **GELONÆTHA.**

Gelonætha, *Thoms. Rev. et Mag. de Zool.* 1878, p. 12.
Astrimus, *Sharp, Trans. Ent. Soc.* 1878, p. 204.

Type. *G. hirta*, Fairm.

Range. That of the type species.

Head short, with the antennal supports slightly raised; the clypeus and genæ very short; the eyes rather large, coarsely facetted, emarginate. Antennæ hairy, almost as long as the body in the ♀, longer than it in the ♂; third joint distinctly longer than the fourth or fifth and still longer than the first; fourth to sixth subequal, seventh to tenth gradually shorter. Prothorax rounded at the sides, broader than long, feebly convex above; the disc somewhat flattened and furnished with a few small callosities. Elytra rounded at the apex, each armed with a small spine or tooth at the suture. Legs moderately long; the femora compressed subfusiform; first joint of middle tarsus as

long as the next two united, that of the hind tarsus almost as long as the remaining joints united. Front coxæ rounded; their acetabula open posteriorly and rounded on the outer side; the intercoxal process rather narrow, nearly flat, and scarcely dilated posteriorly. Acetabula of middle coxæ very narrowly or not all open to the epimera, almost shut off from them by a prolongation of the antero-lateral angles of the metasternum. Episterna of metathorax gradually retracted posteriorly.

161. **Gelonætha hirta**, *Fairm.* (Stromatium) *Rev. et Mag. de Zool.* 1850, p. 60.

Gelonætha curtipes, *Thoms. Rev. et Mag. de Zool.* 1878, p. 13.
Astrimus obscurus, *Sharp, Trans. Ent. Soc.* 1878, p. 204.

Reddish brown to dark brown in colour; scantily clothed with greyish depressed pubescence interspersed with moderately long suberect tawny setæ. Head densely punctate, marked above with a feeble median groove which extends anteriorly between the antennal supports. Prothorax densely rugulose-punctate, somewhat sparsely asperate at the sides; the disc with a postero-median and two nearly obsolete anterior callosities. Elytra densely punctate, the punctures somewhat unequal in size, rather strong on the anterior half and gradually smaller towards the apex; each elytron with one or two feebly raised longitudinal lines. Metasternum, except at the side, and the abdomen very sparsely punctate. Femora almost impunctate; the tibiæ punctate.

Fig. 62.—*Gelonætha hirta*, Fairm. × $\frac{2}{1}$.

Length 9–16; *breadth* $2\frac{1}{4}$–$4\frac{1}{2}$ mm.

Hab. Calcutta; Coromandel Coast; Nilgiri Hills; Siam; Philippine Is.; Sandwich Is.; Tahiti.

Genus **TRINOPHYLUM.**

Trinophylum, *Bates, P. Z. S.* 1878, p. 720; *id. Scientific Results Second Yarkand Mission, Col.* p. 21 (1890).

Type, *T. cribratum*, Bates.

Range. Himalayas from Kashmir to North Assam.

Head short, with the antennal supports depressed; the front short and transverse, marked with a foveate impression on each side; eyes emarginate, not very coarsely facetted, rather distant above. Antennæ of ♂ nearly as long as the body; first joint gradually clavate, slightly curved; second nearly twice as long as broad; fourth shorter than the third or fifth; fifth to eleventh subequal in length. Prothorax feebly convex or somewhat flattened above, rounded at the sides, slightly constricted at the base, a little broader than it is long. Elytra scarcely more than twice

as long as their width across the base, rounded at the apex. Acetabula of front coxæ rounded externally, open posteriorly; the intercoxal process flattened, rather narrow, and scarcely dilated at the end; the acetabula of the middle coxæ do not extend to the epimera. Episterna of metathorax narrow, attenuated posteriorly. Legs moderately long; femora strongly clavate, pedunculate at the base; first joint of hind tarsus as long as the second and third united.

162. **Trinophylum cribratum**, *Bates, P. Z. S.* 1878, p. 720; *id. Scientific Results Second Yarkand Mission, Col.* p. 22, pl. 1, fig. 19 (1890).

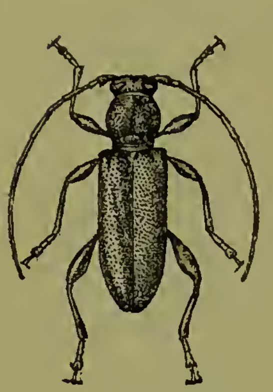


Fig. 63.
Trinophylum cribratum, Bates, ♂. × ¾.

Chestnut-brown in colour, more or less nitid, sparsely furnished above with short semi-erect fulvous brown hairs. Head and basal joints of antennæ finely rugulose-punctate. Prothorax closely and rather strongly punctured; marked with a feeble sinuate groove or depression near the apex and another near the base; the disc slightly depressed along the middle, with a very narrow impunctate space behind. Elytra closely and strongly punctured, less strongly near the apex. Body beneath reddish brown, sparsely pubescent, less closely and rather finely punctured; prosternum transversely depressed a little behind the front margin; abdomen narrowed posteriorly, first segment longest, second to fourth successively shorter. Legs reddish brown, minutely and sparsely punctate.

Length 11–13; *breadth* $3\frac{1}{2}$–4 mm.

Hab. Murree; Kashmir; Assam: Sylhet.

Genus CERESIUM.

Ceresium, *Newman, Entomologist,* i, p. 322 (1842); *Lacord. Gen. Coléopt.* viii, p. 353 (1869).
Diatomocephala, *Blanchard, Voy. au Pôle Sud, Zool.* iv, p. 266 (1853); *Lacord. l. c.* p. 354.
Pneumida, *Thoms. Syst. Ceramb.* p. 191 (1864).

Type, *C. raripilum*, Newm., a species from the Philippine Islands.

Range. Oriental Region, China, Oceania, Madagascar, and Mexico.

Head little exserted, slightly concave between the antennæ; front subvertical or oblique; eyes emarginate, rather widely separated above. Antennæ slender, distinctly longer than the body in the ♂, very slightly or not longer than it in the ♀; third joint subequal in length to the first, sometimes slightly longer,

sometimes shorter; fourth shorter, the fifth usually longer, than the third. Prothorax longer than broad, generally subcylindrical, sometimes rounded at the sides. Elytra slightly convex above, usually rounded at the apex. Legs of moderate length; the femora usually pedunculate at the base, with a clavate thickening towards the apex, sometimes gradually thickened from the base and formed into a fusiform club towards the apex. Acetabula of front coxæ open posteriorly, the intercoxal process narrow, scarcely or not dilated at the end; acetabula of the middle coxæ not extended to the epimera.

163. **Ceresium gracile,** *Perroud* (Raphidera?), *Ann. Soc. Linn. de Lyon* (2) ii, p. 333 (1855).
Ceresium cretatum, *White, Cat. Col. B. M., Longic.* ii, p. 246 (1855).

Narrow and elongate, cinnamon-brown in colour, sparsely pubescent, marked above and along the sides beneath with small spots of dense white pubescence; head with two white spots on the vertex. Prothorax with four laterally placed white spots above—two rounded spots anteriorly and two, more elongate, at the base; also a smaller spot at the middle of each side; scutellum white. Elytra each with six spots—two placed obliquely between the base and the middle, three, in a triangle, behind the middle, and the sixth, transversely arcuate, a little before the apex. Antennæ longer than the body; third joint subequal in length to the first and scarcely longer than the fourth; fourth much shorter than the fifth or any of the succeeding joints except the last. Prothorax subcylindrical, about one-third longer than its width *. Elytra parallel-sided, rounded at the apex, distinctly and rather closely punctured, the punctures feebler near the apex.

Length 9–10; *breadth* 2 mm.

Hab. Southern India: Pondicherry; North Canara; Ceylon.

164. **Ceresium rufum,** *Lameere, Ann. Soc. Ent. Belge,* xxxiv, *C. R.* p. ccxi (1890).

"Close to *C. cretatum*, White, but without the white spots on the elytra. Reddish-testaceous in colour and clothed with a short faint greyish pubescence. Head moderately lengthened, very faintly rugose on the vertex; antennæ ciliated beneath. Prothorax a little longer than broad, its sides feebly rounded, very rugose on the disc, the rugosities transverse, two pubescent white spots on each side. Scutellum white. Elytra somewhat strongly

* Although Perroud has described the prothorax as "deux fois et demie aussi long que large," I have no doubt about the identification of his species; the description which he has given of it is very full, and in other respects, especially as to the position and character of the white spots, very accurate. The genus *Rhaphidera*, Newm., to which he referred the species, exists only as a name; it has never been characterized. In the Catalogue of Gemminger and Harold it appears as *Rhaphidodera*, Perroud, notwithstanding Perroud's statement that he was wholly ignorant of the characters of the genus.

punctured at base, more feebly and sparsely towards their apices. Breast and abdomen with more or less distinct pubescent white spots; legs clothed with rather long sparse pubescence; the femora pedunculate at base, clavate towards the apex.

"*Length* 12 mm.

"*Hab.* India: Kuubur."

165. **Ceresium angustulum**, sp. n.

Narrow and elongate; entirely testaceous red in colour, sparsely and faintly pubescent. Antennæ longer than the body; first and third joints subequal in length, each very slightly longer than the fourth but distinctly shorter than the fifth. Prothorax cylindrical, about one-fourth longer than broad; closely but not strongly punctured; with a slightly raised carina along the middle of the disc. Elytra closely and strongly punctured, the punctures larger nearer the base, smaller towards the apex; rounded at the apex. Femora gradually thickened from a little before the middle and narrowed again towards the apex; first joint of hind tarsus almost as long as the next two joints united.

Length $8\frac{1}{2}$; *breadth* $2\frac{3}{4}$ mm.

Hab. Southern India: Nilgiri Hills (*H. L. Andrewes*).

166. **Ceresium geniculatum**, *White, Cat. Col. B. M., Longic.* ii, p. 245 (1855).

Ceresium rufipes, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 537 (1869).

Black, clothed very sparsely with greyish hairs; antennæ and legs chestnut-red, with the femora narrowly tipped with black at the outer end. Antennæ one-third longer than the body in the ♂, a little longer than it in the ♀; sparsely fringed with pale hairs below; third joint not longer than the first and only slightly longer than the fourth. Prothorax a little longer than broad, slightly rounded at the sides, very closely and rather coarsely punctured, sometimes with a short smooth line along the middle of the disc. Elytra closely and rather strongly punctured from the base to a little past the middle and more finely towards the apex, each puncture with a short, decumbent, grey hair. Femora glossy, fusiform-clavate, pedunculate at the base, very sparsely pubescent and almost impunctate; tibiæ not carinate.

Length $9-12\frac{1}{2}$; *breadth* 2-3 mm.

Hab. Burma; Andaman Islands; Siam; Timor; Flores.

167. **Ceresium zeylanicum**, *White, Cat. Col. B. M., Longic.* ii, p. 246 (1855); *Pascoe, Trans. Ent. Soc.* (3) iii, p. 538.

Varies from reddish brown to blackish brown in colour, with the elytra and abdomen testaceous. Head covered in part with tawny pubescence. Antennæ reddish brown, about one-third longer than the body in the ♂; third joint scarcely longer than the first, but distinctly longer than the fourth; fifth to tenth sub-

equal, each somewhat longer than the third. Prothorax subcylindrical, slightly longer than broad and very feebly rounded at the sides; densely covered with greyish-white pubescence except over the middle of the disc and on two or three small shining callosities towards the sides; the central area almost bare of pubescence and coarsely punctured, but with a narrow median and two small anterior elevations, smooth. Elytra rounded at the apex, with rather close-set piliferous punctures, which are strong near the base and become gradually feebler towards the extremity. Abdomen testaceous, very faintly pubescent and without spots; the rest of the underside and the legs dark brown, veiled with a short ash-grey pubescence; prosternum before the coxæ and the sides of the prothorax anteriorly strongly but not very closely punctured. Femora pedunculate at base, clavately thickened below the middle.

Length 12; *breadth* 3 mm.

Hab. Ceylon; Assam: Sibsagor (*in Indian Museum*); Tenasserim: Victoria Pt. (*Doherty*); Borneo (*Wallace*).

168. **Ceresium leucosticticum**, *White, Cat. Col. B. M., Longic.* ii, p. 245, pl. vi, fig. 1 (1855).

Brownish black above, with the elytra somewhat reddish along the middle part of the sutural border; prothorax with four small laterally-placed spots of chalk-white pubescence above—two near the apex and two at the base; scutellum white. Elytra with nine spots of chalk-white pubescence—one at the suture a little behind the scutellum, three, in a triangle, on each elytron just before the middle, and one, narrow and transverse, on each at about one-sixth from the apex. Antennæ reddish brown, faintly pubescent, about a third longer than the body in the ♂, a little longer than it in the ♀; first joint closely punctulate; third a little longer than the first and distinctly longer than the fourth. Prothorax rounded at the middle of each side, a little longer than its width across the middle; very closely subrugosely punctured, with a small smooth space on the middle of the disc. Elytra somewhat depressed near the suture, distinctly but not very closely punctured, the punctures much feebler towards the apex, and each with a short decumbent hair. The body beneath varies from dark brown to reddish brown in colour, with spots of white pubescence at the sides. Legs reddish brown, with the femora darker at the tips; femora rather closely punctulate; tibiæ carinate.

Fig. 64.
Ceresium leucosticticum, White, ♂. × $\frac{3}{1}$.

Length 8–12; *breadth* $2\frac{1}{2}$–3 mm.

Hab. Assam; Burma; Siam; Sumatra.

169. **Ceresium rotundicolle,** *Pascoe, A. M. N. H.* (5) xv, p. 54 (1855).

Very closely allied to *C. leucosticticum*, White. Agrees wholly in structural characters with that species, and in the size and position of the white markings, but differs in colour. The colour above, as well as below, is a light chocolate-brown, and the spots not chalk-white as in *leucosticticum*, but of a somewhat yellowish tint.

Length 8–12; *breadth* 2–3 mm.

Hab. Ceylon; Southern India.

170. **Ceresium modestum,** sp. n.

♀. Testaceous red, with the elytra somewhat yellowish; sparsely setose; legs brownish black, with the stalks of the femora and the clavate portion in the middle more or less testaceous; first three joints of the antennæ black, the rest ferruginous. Head finely rugulose-punctate in front and between the antennæ and eyes. Antennæ about one-third longer than the body; first joint finely and densely punctate; third joint a little longer than the first or fourth and shorter by nearly one-third than the fifth; fifth to ninth subequal in length. Prothorax subcylindric, a little narrowed in front, about one-third longer than broad, very faintly pubescent, subnitid, marked with a few scattered punctures; the disc very feebly tuberculate at about one-third from the apex. Elytra densely punctate, the punctures setigerous, and gradually smaller as they approach nearer to the apex. Femora subabruptly clavate, pedunculate at base; the hind pair not extended as far as the apex of the elytra; first joint of hind tarsi not quite so long as the second and third united. Body beneath testaceous, very faintly covered with grey pubescence.

Length 11; *breadth* 3 mm.

Hab. Assam: Patkai Mts. (*Doherty*).

171. **Ceresium ventrale,** sp. n.

Of a pale yellowish-testaceous colour, with the body beneath and the hind femora black; the breast and abdomen rather densely clothed with whitish pubescence. Head somewhat densely punctured. Antennæ about one-third longer than the body in the ♂; first joint densely punctate, shorter than the third; third about one-third longer than the fourth, which is only half as long as the fifth. Prothorax nearly one-third longer than broad, subcylindric, a little wider in the middle than towards each end; the surface impunctate and dull. Scutellum densely covered with white pubescence. Elytra rather densely punctate, and very sparsely pubescent; the punctures very minute on the apical third and larger and more distinct anteriorly. Femora clavate and pedunculate, the hind pair extend a little past the apex of

the elytra; first joint of the hind tarsi as long as the second and third united.

Length 8–11; *breadth* 1½–2 mm.

Hab. Burma: Karen Mts. (*Doherty*).

172. **Ceresium apicale**, sp. n.

Testaceous red; apex of elytra, legs (the peduncles of the femora excepted), metathorax, abdomen and first three joints of the antennæ black. Antennæ much longer than the body in the ♂; third joint a little longer than the first and nearly twice as long as the fourth, shorter than the fifth or sixth. Prothorax one-third longer than broad, subcylindrical, narrowed in front and to a slight degree at the base; the surface rather dull, somewhat irregularly and not very closely punctured, with a narrow, smooth median callosity on the middle of the disc. Elytra densely and rather strongly punctured, the punctures each with a short pale decumbent hair. Body beneath rather densely covered with greyish pubescence at the sides. Legs faintly pubescent, impunctate; first joint of the hind tarsi as long as the next two joints united.

Length 10; *breadth* 2 mm.

Hab. Tenasserim.

173. **Ceresium nilgiriense**, sp. n.

Testaceous red in colour, the elytra somewhat paler in tint than the prothorax; head on the vertex between and behind the eyes covered with dense white pubescence; prothorax with irregular confluent patches of white pubescence on the sides and on the lateral parts of the disc; the scutellum also white; body beneath with ashy pubescence on the sides of the thorax and four white spots on each side of the abdomen. Antennæ longer than the body; third joint slightly longer than the first and distinctly longer than the fourth; fifth to tenth subequal, each longer than the third. Prothorax slightly longer than broad, a little rounded at the sides; the disc irregularly rugulose or granulate. Elytra rounded at the apex; closely punctured, the punctures much stronger, more crowded and somewhat granular on the basal half, gradually more feeble towards the apex, each with a short, decumbent grey hair. Femora fusiform clavate, pedunculate at the base.

Length 13–16; *breadth* 3½–4 mm.

Hab. Southern India: Nilgiri Hills (*H. L. Andrewes*); Ceylon.

174. **Ceresium andamanicum**, sp. n.

Brownish red, sparsely covered with greyish pubescence. Antennæ about one-fourth longer than the body in the ♂, slightly longer than it in the ♀; third joint scarcely longer than first,

distinctly longer than the fourth. Prothorax subcylindrical, nearly one-fourth longer than broad, very slightly rounded at the sides; covered rather densely with short greyish or yellowish-grey pubescence on the sides, less densely on the disc; disc with a feeble cariniform elevation along the middle and three small callosities placed in an oblique row along each side. Scutellum closely covered with white pubescence. Elytra closely and strongly punctured from the base to a little past the middle, feebly towards the apex; the punctures each with a short, decumbent grey hair. Femora strongly fusiform-clavate, thickened from the base; faintly pubescent and almost impunctate.

Length 11–14; *breadth* 3–3½ mm.

Hab. Andaman Islands.

In general form, more especially in the shape and structure of the prothorax, this species greatly resembles *C. zeylanicum*, White, but differs from it in the shape and colour of the femora. It differs from *C. simplex*, Gyll., by its narrower and more elongate prothorax, and its more strongly thickened and darker coloured legs.

175. **Ceresium simplex**, *Gyll.* (Stenochorus), *Schönh. Syn. Ins., App.* ii, p. 178 (1817).

Arhopalus ambiguus, *Newman, Entomologist*, i, p. 246 (1842).

Brownish testaceous; antennæ and legs yellowish. Head rather densely covered above with pale yellowish pubescence. Antennæ a little longer than the body in the ♂, not quite so long as it in the ♀; third joint not longer than the first, distinctly longer than the fourth; fifth and sixth subequal, each longer than the third. Prothorax almost as broad as it is long, slightly rounded at the sides, these covered with greyish pubescence; disc faintly covered with greyish pubescence in the middle, marked with two spots or a longitudinal band of dense tawny-yellow pubescence at each side; a narrow median and some small laterally placed callosities, smooth and glabrous, the intervening spaces sparsely and irregularly punctured. Scutellum covered with pale fulvous pubescence. Elytra closely and strongly punctured from the base to the middle, the punctures nearest the base somewhat granulate; less strongly punctured behind the middle, the punctures become gradually feebler as they approach nearer to the apex; the punctures also carry each a pale decumbent seta. Femora fusiform-clavate, thickened gradually almost from the base.

Length 11–16; *breadth* 3–4¼ mm.

Hab. N. India; Burma; Tenasserim; Ceylon; Nicobar Islands; Philippine Islands; Sumatra and Java to New Guinea; Mauritius and Madagascar. Recorded also from Mexico.

This species has been generally recognized as the one described by Gyllenhal under the name given above. But it corresponds in part only with his description, according to which the antennæ are sometimes twice as long as the body—"Antennæ interdum corpore

duplo, in aliis parum longiores." He probably confounded two distinct species, belonging perhaps to different genera, under the same name. The present species is quite distinct from all others included in the Indian fauna; it is very closely allied to *C. unicolor*, Fab., a widely distributed species found in the Oceanic islands.

Genus SALPINIA.

Salpinia, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 546 (1869).

Type, *S. diluta*, Pasc., a species from Borneo.

Range. Assam, Penang, Borneo, and Java.

Very closely allied to and scarcely distinct from *Ceresium*, Newm. The only points of difference are that the femora are gradually and less strongly thickened, and that the fourth antennal joint is distinctly longer than the first and very little shorter than the third.

Two species of the genus are known—one from the Patkai Mts. in Assam, the other from Penang, Borneo, and Java.

176. **Salpinia socia**, sp. n.

Testaceous red, with the elytra yellowish; the legs brownish black, the basal half of the middle and hind femora yellowish, the tarsi and apices of the tibiæ reddish brown or brown. Head faintly covered in parts with golden pubescence. Antennæ of ♀ one-third or so longer than the body; first joint feebly punctulate; third slightly longer than the fourth, which is nearly one-third longer than the first; fifth subequal to the third. Prothorax about one-fifth longer than broad, slightly rounded at the sides; sparsely but strongly punctured, the sides and base covered with short grey pubescence which gives silvery reflections. Elytra rather faintly covered with short, pale pubescence; distinctly but not very densely punctured from the base to within one-fifth or one-sixth from the apex. Femora gradually and not strongly thickened from the base for about four-fifths of their length, and then narrowed towards the apex; the hind pair extended just a little past the apex of the elytra; fourth joint of the hind tarsi slightly longer than the second and third united. Body beneath faintly covered with silvery-grey pubescence, which becomes more visible in certain lights.

Length 9; *breadth* 2 mm.

Hab. Assam: Patkai Mts. (*Doherty*).

This species is closely allied to *S. diluta*, Pasc., but easily distinguished from it by the absence of markings from the elytra.

Genus STENYGRINUM.

Stenygrinum, *Bates, A. M. N. H.* (4) xii, p. 154 (1873).

Type, *S. quadrinotatum*, Bates.

Range. One species only is known, which ranges from Assam and North Burma through China and Japan.

Very closely allied to *Ceresium*, Newm., from which it differs as follows:—Femora more abruptly clavate, tibiæ carinate or sharply edged along the outer face, the middle tibiæ curved, and each of the antennal joints from the fifth to the tenth with acute anterior angle at the apex.

177. **Stenygrinum quadrinotatum**, *Bates, A. M. N. H.* (4) xii, p. 154 (1873).

Of a reddish-chestnut colour; the head and prothorax dull; the elytra glossy, black or brownish black in the middle third of their length and marked each with two yellow spots—one a little before, the other just behind the middle. Antennæ of ♂ a little longer and of ♀ a little shorter than the body; faintly pubescent and sparsely ciliate beneath; third joint slightly longer than the first and nearly one-third longer than the fourth; fifth to seventh subequal, each very slightly longer than the third. Prothorax subcylindrical, a little wider in the middle, distinctly longer than broad; closely but not very deeply punctured above and at the sides, more closely and strongly punctured beneath except near the front border; disc with a short, slightly raised smooth line along the middle. Elytra sparsely setose, distinctly but not very closely punctured except near the apex, the punctures there much smaller and less distinct; each elytron sharply rounded at the apex, slightly depressed in front near the suture and posteriorly on the middle of the disc. Metasternum, abdomen and the clavate portion of the femora very glossy and almost impunctate.

Length 8–13; *breadth* 2–3 mm.

Hab. Assam: Shillong, Jaintia Hills; Manipur (*Doherty*); Burma: Ruby Mines (*Doherty*); China; Japan.

Group *OBRIINI.*

Eyes large, coarsely facetted, deeply emarginate. Front coxæ exserted, their acetabula completely closed posteriorly, and not angulated on the outer side. Acetabula of the middle coxæ shut off from the epimera. Antennæ not spined. First sternite of the abdomen very long in both sexes, the second sternite of the ♀ much longer than the third, and, in most of the genera, very densely fringed with hairs posteriorly.

Synopsis of the Genera.

A. Front coxæ very strongly exserted, subconical in form; metathoracic episterna marked each with a rather deep longitudinal groove .... OBRIUM, p. 165.

B. Front coxæ less strongly exserted, subglobular in form; metathoracic episterna not marked with a longitudinal groove.

a. Prothorax less than twice as long as its width at base; 2nd abdominal sternite of ♀ densely fringed with hairs posteriorly .... STENHOMALUS, p. 166.
b. Prothorax twice as long as its width at base; 2nd abdominal sternite of ♀ not fringed with hairs posteriorly .... IBIDIONIDUM, p. 168.

Genus OBRIUM.

Obrium, *Serville, Ann. Soc. Ent. Fr.* iii, p. 93 (1834); *Lacord. Gen. Coléopt.* viii, p. 361 (1869).
Phyton, *Newman, The Entomologist,* i, p. 19 (1840).

Type, *O. cantharinum*, Linn., a European species.

Range. Europe, Northern Asia, North and Central America, Burma, Borneo, and Mauritius.

Head subvertically sloped in front; the clypeus limited above by a rather deep, arcuate impression; palpi short, the maxillary a little longer than the labial, last joint slender subcylindrical; eyes large, deeply emarginate. Antennæ about one-third longer than the body in the ♂, very little longer than it in the ♀, sparsely furnished with long hairs; third and fourth joints subequal, shorter than the fifth, fifth to tenth subequal, or gradually diminishing in length. Prothorax longer than broad, tuberculate or protuberant at, or before, the middle of each side, constricted near the base and also, but to a less extent, near the apex. Elytra parallel-sided, or slightly widened posteriorly, broadly rounded at the apex. Legs moderately long; femora clavate and pedunculate; front coxæ strongly exserted, almost contiguous; first joint of hind tarsus as long as the second and third united. Episterna of metathorax marked with a deep longitudinal groove. First abdominal segment of ♂ as long as the next three segments united, the second nearly twice as long as the third; first segment of ♀ as long as the rest of the abdomen, the second densely fringed with hairs posteriorly, the third very short, the fourth and fifth longer.

178. **Obrium posticum,** *Gahan, Ann. Mus. Civ. Genova,* xxxiv, p. 14 (1894).

Yellowish-testaceous; with the front of the head, the legs (excepting the stalks of the femora) and the apex of the elytra pitch-black; the first four joints of the antennæ black, the rest dingy yellow. Head very finely and sparsely punctulate. Prothorax tuberculate at the middle of each side, constricted near the base and to a less extent near the apex; minutely and sparsely punctulate above, with a nearly obsolete median tubercle on the posterior part of the disc. Elytra distinctly and rather

densely punctate, the punctures each with a moderately long decumbent hair.

Length 9 mm.

Hab. Burma: Mandalay (*Fea*).

Genus STENHOMALUS.

Stenhomalus, *White, Cat. Col. B. M., Longic.* p. 243 (1855); *Lacord. Gen. Coléopt.* viii, p. 362 (1869).

Stenomalus, *Gemm. et Har. Cat. Col.* ix, p. 2841 (1872).

Type, *S. fenestratus*, White.

Range. China, N. India, Burma, Ceylon, and Malay Archipelago.

Nearly allied to *Obrium*, Serv. Resembles it in form and general appearance, but is a little more depressed, the prothorax relatively longer, the front coxæ less strongly exserted and less closely approximated to one another. The antennæ are somewhat longer than in *Obrium*, with the fifth and following joints longer in proportion to the third and fourth; in the type and other closely allied species they are furnished with long projecting hairs, especially well marked at the apices of the third to fifth joints, where two or three coming off side by side have at first sight the appearance of a single thick hair or long slender spine. In the structure of the abdomen, and in the sexual differences appertaining thereto, the genus resembles *Obrium*.

A. *Eyes very large, closely approximated above and below; antennæ with long projecting hairs.*

179. **Stenhomalus fenestratus**, *White, Cat. Col. B. M., Longic.* p. 243, pl. 8, fig. 2 (1855).

Reddish brown; the elytra marked each with two pale subhyaline spots, rounded or oval in shape, placed near the suture, one just before the middle, the other between the middle and the apex; the apex itself and the shoulders somewhat paler in colour than the surrounding parts. Antennæ, the basal joint excepted, covered with very short fulvous pubescence. Prothorax obtusely tuberculated at the middle of each side; constricted strongly at the base and very slightly in front of the lateral tubercles; minutely and very sparsely punctate, sparsely furnished with longish erect hairs. Elytra finely and somewhat sparsely punctate on the disc from the base to the middle. Femora rather gradually and not strongly clavate. First joint of hind tarsi shorter than the second and third united.

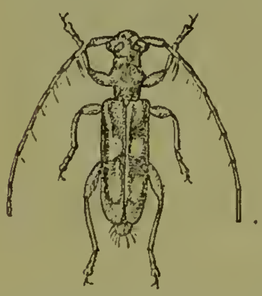


Fig. 65.—*Stenhomalus fenestratus*, White. × $\frac{2}{1}$.

Length $6\frac{1}{2}$–8 mm.

Hab. Northern India; North China.

180. **Stenhomalus Y-pallidum,** *Motsch.* (Phyton) *Bull. Soc. Imp. Nat. de Moscou,* p. 495 (1863).

"Elongate, narrow, parallel-sided, depressed, sparsely punctured, very slightly nitid, fusco-piceous. Elytra with four whitish bands, oblique, joined angularly at the suture, the third strongly dilated, the fourth apical, interrupted at the suture; eyes large, black, somewhat prominent, facetted, closely approximate, deeply emarginate; antennæ and legs ringed with whitish; thorax narrower than the head, subcylindrical, rugose, clothed with sericeous pubescence, subnodose at the sides. Elytra scarcely broader than the head, parallel-sided, the apex rounded, sparsely pilose.

"Very close to *P. pallidum*, Say, from North America, but the thorax is narrower and silky with the elytral bands more distinct, the second band curved so as to form a V."

Length 5; *breadth* $1\frac{1}{4}$ mm.

Hab. Ceylon: Newara-Eliya.

I have not seen a specimen of this species, but judging from the description it is almost certainly a *Stenhomalus*, and as the eyes are closely approximate I have placed it in this section.

B. *Eyes smaller, rather widely separated above and below; antennæ without long projecting hairs.*

181. **Stenhomalus lateralis,** *Pascoe* (Obrium), *Trans. Ent. Soc.* (2) v, p. 26 (1859).

Brownish testaceous; prothorax with a dark brown band along each side; elytra each with a dark brown spot near the shoulder, another near the suture at about one-third from the base, and a dark brown ring near the apex, the apex itself and the spot enclosed by the ring yellowish, the lateral border dark brown except near the base and apex; antennæ with the first joint testaceous, the rest pale yellow; legs yellowish. Eyes rather widely separated above and below. Prothorax nearly twice as long as its width at the base; very slightly protuberant on each side just before the middle, narrowed distinctly towards the base and very little in front. Elytra slightly dilated posteriorly; distinctly and rather thickly punctate from the base to the middle or a little past the middle, the punctures show a tendency to an arrangement in rows.

Length 7; *breadth* 2 mm.

Hab. Ceylon.

In this species the eyes are widely separated as in the genus *Obrium*, the antennæ are without the characteristic long hairs of the type species, and the prothorax also is longer and not tuberculate at the sides.

Genus IBIDIONIDUM.

Ibidionidum, *Gahan, Ann. Mus. Civ. Genova,* xxxiv, p. 14 (1894).

Type, *I. corbetti*, Gahan.

Range. That of the type species.

Head strongly exserted; front obliquely sloped, separated from the clypeus by a transverse groove; eyes prominent, coarsely facetted, emarginate. Antennæ a little longer than the body in both sexes; first joint curved, gradually thickened towards the apex; third a little more than twice as long as the second and slightly shorter than the fourth; fifth to tenth subequal, each much longer than the fourth. Prothorax elongate subcylindrical, with a conical tubercle at the middle of each side; constricted at the base, slightly also in front of the lateral tubercles. Elytra a little more than twice as long as the prothorax, gradually narrowed posteriorly and rounded at the apex. Legs moderately long; the femora somewhat abruptly clavate, pedunculate at the base. Abdomen much narrowed towards the apex; first segment in the ♂ as long as the next four united; first segment in the ♀ a little longer than the second, and the second as long as the succeeding segments united.

182. **Ibidionidum corbetti**, *Gahan, Ann. Mus. Civ. Genova,* xxxiv p. 15, pl. 1, fig. 3 (1894).

Fig. 66.—*Ibidionidum corbetti*, Gahan. × 2/1.

Testaceous red, nitid, with the elytra of a paler, somewhat yellowish colour; the head, prothorax, legs and antennæ sparsely furnished with rather long erect hairs. Prothorax twice as long as its width across the base; slightly raised and curved in front, feebly bi-nodose on the disc. Elytra distinctly and not very densely punctate, the punctures setigerous and arranged in rows, which extend from the base almost to the apex. Intercoxal process of prosternum extending some distance beyond the coxæ behind and dilated so as to meet the epimera, which are correspondingly broad behind the coxæ. First joint of hind tarsi nearly as long as the second and third united. The joints of the antennæ from the fourth to the ninth are slightly angulated at the apex on the anterior side.

Length 7–10 mm.

Hab. Burma: Paungdé (*Corbett*), Yenang-gyaung (*Fea*).

Group *MOLORCHINI.*

Head more or less strongly exserted; antennal supports feeble, entire; eyes lateral, finely facetted, deeply emarginate; gula with very short mentigerous process, sometimes absent; palpi filiform. Prothorax unarmed or feebly tuberculate at the sides. Mesonotum with or without stridulatory area. Scutellum small. Elytra abbreviated in most of the genera. Front coxæ angulate on the outer side, subconical and more or less prominent on the inner; their acetabula usually closed, exceptionally (*Molorchus*) open posteriorly. Acetabula of middle coxæ extended to epimera. Femora generally clavate and pedunculate. Abdominal segments unequal in length.

Synopsis of Genera.

A. Elytra abbreviated, more or less dehiscent posteriorly.
  a. Elytra slightly dehiscent, rounded at end; acetabula of front coxæ open posteriorly . MOLORCHUS, p. 169.
  b. Elytra strongly dehiscent, pointed at end; acetabula of front coxæ closed posteriorly MERIONŒDA, p. 171.
B. Elytra normal, completely covering abdomen .... KUNBIR, p. 174.

Genus **MOLORCHUS.**

Molorchus, *Fabr.* (in part) *Ent. Syst.* i, 2, p. 356 (1792); *Mulsant Coléopt. de France, Longic.* ed. 1, p. 107 (1839); *Lacord. Gen. Coléopt.* viii, p. 486 (1869).
Heliomanes, *Newman, A. M. N. H.* v, p. 17 (1840).
Cænoptera, *C. G. Thoms. Skand. Col.* i, p. 150 (1859).
Subgen. Linomius, *Mulsant, Coléopt. de France, Longic.* ed. 2 p. 226 (1862–3).
Subgen. Sinolus, *Mulsant, l. c.* p. 228.
Conchopterus, *Fairm. in Jac. du Val & Fairm. Gen. Col. Eur. Longic.* iv., p. 153 (1868).

Type, *M. minor*, Linn., a European species.

Range. Europe, North America, Ceylon, and Australia.

Head short, slightly concave between the antennæ; the front vertical, transverse; maxillary palpi a little longer than the labial, the last joint in both subfusiform; eyes deeply emarginate. Antennæ slender, filiform, much longer than the body in the ♂, shorter than the body in the ♀; first joint gradually thickened to the apex, moderately long; third, fourth and fifth variable as to their relative length; sixth to tenth subequal; eleventh either appendiculate or succeeded by a twelfth joint in the ♂, simple and always terminal in the ♀. Prothorax longer than broad, constricted at the base and to a less degree in front; slightly tuberculate at each side; usually with some callosities on the disc. Elytra very short, covering only the base of the abdomen; slightly dehiscent posteriorly and rounded at the end. Femora

abruptly clavate, with a rather long slender peduncle at the base; the hind pair as long as the abdomen in the ♂; tarsi slender, with the first joint in the hind pair as long as the second and third united. Front coxæ strongly exserted, their acetabula angulated on the outer side, open posteriorly; the intercoxal process very narrow.

183. **Molorchus taprobanicus**, sp. n.

♂. Pitch-black and nitid, with the legs somewhat reddish at the base, and the abdomen furnished with patches of greyish-white pubescence at the sides. Antennæ 11-jointed, more than twice as long as the body; third joint slightly shorter than the fourth, the latter distinctly shorter than the fifth, sixth to tenth gradually and successively longer; eleventh not longer than the tenth, its appendix very short and somewhat curved. Prothorax with a small conical tubercle on each side; the disc with a short, narrow, median and two longer, lateral callosities, which are smooth and glossy, the narrow interspaces between them closely punctured. Elytra not longer than the prothorax, extended posteriorly as far as to the posterior border of the metasternum; sparsely punctate, very glossy, depressed in the middle, each sharply rounded at the apex. Femora rather strongly clavate; middle tibiæ slightly dilated on the inner side just before the middle; the hind tibiæ somewhat sinuately bent. First joint of the hind tarsus a little longer than the second and third united.

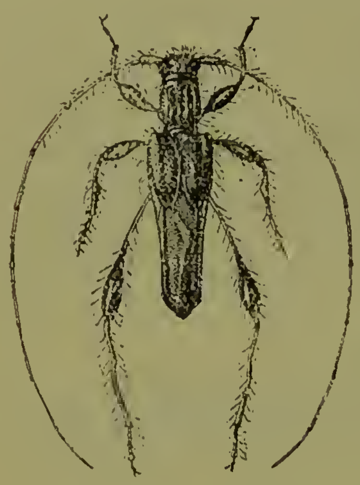


Fig. 67.
Molorchus taprobanicus, Gahan, ♂.

Length (to apex of abdomen) 8 mm., of elytra 2 mm.
Hab. Ceylon.

184. **Molorchus filiformis**, *Motsch. Études Entom.* 1858, p. 67.

"Elongate, parallel-sided, subfiliform, nitid, sparsely and coarsely punctured, black; antennæ at base, tibiæ and tarsi rufo-piceous. Elytra rounded at the apex, marked with a whitish-testaceous, transverse, subsinuate spot in the middle of each elytron; thorax elongate, slightly dilated posteriorly, constricted at base; elytra short, shorter than the length of the thorax, depressed at the suture, margined, rounded at both sides of apex.

"*Length* $2\frac{1}{2}$; *breadth* $\frac{1}{3}$ lines.
"*Hab.* Ceylon.
"Much narrower than either *M. dimidiatus* or *M. umbellatus*,

nobis; the thorax proportionally more elongate, more strongly constricted at base, the elytra shorter and narrower. The transverse white band on these sufficiently distinguishes this species. This is one of M. Nietner's interesting discoveries at Colombo in Ceylon."

Genus **MERIONŒDA.**

Merionœda, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 237 (1858); *Lacord. Gen. Coléopt.* viii, p. 490 (1869).

Type, *M. puella*, Pasc., a species from Celebes.

Range. Indo-Malayan and African Regions.

♂. Head somewhat elongated behind the eyes; eyes rather large, deeply emarginate; front strongly sloped, short, separated from the clypeus by rather deep sutural lines. Antennæ generally shorter than the body; the last six or seven joints more or less dilated; first joint curved, thickened towards apex, third and fourth slender, subequal in length. Prothorax narrowed in front, constricted near apex, more or less tuberculate at the sides and also on the disc. Elytra subulate, shorter than the abdomen. Front and middle legs rather short, the front pair the shorter, their femora shortly pedunculate at base, moderately clavate at the apex; hind legs very long, their femora with a long basal peduncle and a more or less abruptly formed, stout, oval club at the apex; the tibiæ furnished with a long posterior spine and a single spur at the apex, also with two rows of small spines or teeth along the outer border. Front coxæ rather strongly exserted, angulated on the outer side, their acetabula closed posteriorly. First and second abdominal segments long, the others short.

♀. Antennæ relatively shorter and the hind legs shorter and less strongly clavate than in the ♂. First abdominal segment equal in length to the rest of the abdomen, obtusely pointed in front; the second segment depressed in the middle, densely fringed with hair posteriorly, third and fourth very short, depressed.

185. **Merionœda indica,** *Hope* (Molorchus), *Gray's Zool. Misc.* p. 28 (1832).

♀. Black, with the abdomen and a ring on each of the hind femora just before the apical club, testaceous yellow. Head with a deep impression that separates the clypeus and front. Antennæ shorter than the body; the outer joints very slightly dilated; third and fourth joints subequal, each a little shorter than the first or fifth. Prothorax longer than broad, narrowed anteriorly, deeply grooved near the apex; the groove deflected backwards near the middle of the disc so as to form two sulcate impressions separating a narrow median from two larger, obliquely

oval, dorsal tubercles; each side with an obtuse tubercle just before the middle. Elytra scarcely more than twice the length of the prothorax; each somewhat in the form of an elongate triangle with a short carina near the apex; the surface strongly but not thickly punctured. First abdominal segment as long as the remaining segments united; second and third fringed with tawny hairs posteriorly. Hind femora strongly and very abruptly clubbed at the apex; hind tibiæ with two rows of short spines along the outer (or dorsal) face, and a long spiniform process at the apex.

Length (to tip of abdomen) 9; *breadth* 2 mm.

Hab. Nepal.

186. **Merionœda andrewesi**, sp. n.

♀. Head, prothorax, elytra and antennæ testaceous, the elytra, especially towards the apex, somewhat paler than the other parts; body beneath, the prothorax excepted, and legs black, with all the tarsi and the tibiæ of the first two pairs reddish brown. Head very glossy, feebly and very sparsely punctured; clypeus separated from the front by a rather deep arcuate impression, from which a short median groove passes upwards along the front. Antennæ reach to the tips of the elytra; first joint glossy, the others faintly pubescent and dull; third shorter than the first or fourth, fifth and sixth increasing, and seventh to tenth decreasing gradually in length. Prothorax glossy, narrower in front than at the base, with an obtuse tubercle on each side just before the middle; a deep transverse groove near the apex and a feebler groove near the base; the disc with three feebly raised tubercles—one median small and flask-shaped, two larger and lateral; the anterior transverse groove deflected in the middle so as to form sulcate depressions that separate the median from the lateral tubercles. Elytra reach almost to the tip of the abdomen; they are about three times as long as the prothorax and meet at the suture for about a third of their length, then dehisce and become very narrow posteriorly, acuminate at the apex; the surface strongly but not very closely punctured. First abdominal segment longer than the rest united, the second fringed posteriorly with tawny hairs, the last segment reddish, and the intermediate segments telescoped and invisible. Hind femora extend by about the apical third beyond the apex of the abdomen, with this portion strongly thickened into a fusiform club; middle and front femora much less strongly thickened; hind tibiæ with two

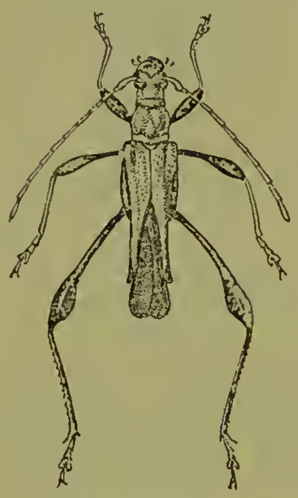


Fig. 68.
Merionœda andrewesi, Gahan. × $\frac{2}{1}$.

rows of short spines along the outer face and armed with a long spiniform process at the apex.

Length 10 ; *breadth* 2½ mm.

Hab. Southern India : Nilgiri Hills (*H. L. Andrewes*).

187. **Merionœda taprobanica**, sp. n.

♀. Testaceous yellow, with the exception of the antennæ and hind legs ; antennæ brownish black, with the first joint somewhat reddish at the base ; hind legs black, with the peduncles of the femora and the extreme base of the tibiæ yellowish. Head nitid ; feebly and sparsely punctulate near the eyes, almost impunctate elsewhere ; clypeus limited above by two deep oblique impressions that meet in the middle. Antennæ reaching to the apex of the elytra ; third and fourth joints subequal, each shorter than the fifth ; fifth slightly, and the following joints more strongly, dilated. Prothorax glossy, not longer than broad, narrowed anteriorly ; a small obtuse tubercle on each side, and three distinctly raised tubercles on the disc—the median one smaller and narrower than the other two and separated from them by sulcate intervals continuous with the deep groove crossing near the apex. The elytra about two and a half times as long as the prothorax, dehisce from about the middle of their length, and are strongly but not very thickly punctured ; each with a short carina near the apex. Hind femora with an abruptly formed, ovate, black club at the apex ; hind tibiæ with two rows of short spines along the dorsal face, and a long spiniform process at the apex.

Length (to tip of abdomen) about 8 mm.

Hab. Ceylon : Kandy (*type in coll. G. Lewis*).

188. **Merionœda nigriceps**, *White* (Heliomanes), *Cat. Col. B. M., Longic.* p. 181, pl. 5, fig. 1 (1855).

♀. Testaceous yellow ; with the head, the distal seven joints of the antennæ, the tips of the elytra, the clavate portions of the hind femora, and all but the bases of the hind tibiæ, brownish black. Head nitid, irregularly punctulate, the punctures thickly placed near the eyes, very sparsely elsewhere ; clypeus separated from the front by a deep impression. Antennæ shorter than the body ; third joint scarcely as long as the first or fourth ; fifth and following joints slightly dilated. Prothorax broader than long, obtusely tuberculate near the middle of each side ; feebly grooved near the apex, the groove deflected backwards on the disc so as to form two lines that separate a narrow, median, very feebly raised area from two laterally placed tubercles. Elytra a little more than twice as long as the prothorax, obtusely pointed at the apex, strongly but not densely punctured. Clavate portion of hind femora elongate-ovate or subfusiform, not so short nor so abruptly formed as in *M. indica* ; hind tibiæ with two rows of short spines

on the outer (dorsal) face, and a long spiniform process at the apex.

Length (to tip of abdomen) 11 mm.

Hab. Burma: Moulmein; Assam: Patkai Mts. (*Doherty*).

189. **Merionœda amabilis**, *Jordan, Stett. Ent. Zeit.* 1895, p. 268.

Unicolorous testaceous yellow; with the antennæ, the extreme apex of the elytra and a ring before the apex of the hind femora black, the apex of the hind tibiæ brownish. Head with a rather deep impression that separates the clypeus from the front, and a short median groove on the front between the antennal supports; finely punctulate, the punctures densely placed near the eyes. Prothorax nitid, longer than broad, obtusely tuberculate on each side and trituberculate above, the median tubercle with a slight depression before the base. Elytra nitid, reaching nearly to the middle of the first abdominal segment; dehiscent from about the middle of their length, strongly punctured in irregular rows.

Length 13; *breadth* 3 mm. Elytra $4\frac{1}{2}$ mm. long.

Hab. Assam: Khasi Hills.

From *M. nigriceps*, White, which it most resembles, this species is readily distinguishable by its yellow head, entirely black antennæ and relatively longer prothorax.

Genus KUNBIR.

Kunbir, *Lameere, Ann. Soc. Ent. Belg.* 1890, *C. R.* p. ccxiii.

Type, *K. telephoroides*, Lameere.

Range. That of the type species.

Allied to *Merionœda*, Pasc., from which it differs by the following characters:—Elytra much longer, completely or almost completely covering the abdomen, a little narrowed in the middle, not dehiscent, separately and rather broadly rounded posteriorly. Hind legs shorter; the femora extend only a little past the apex of the elytra, with the club less abruptly formed; the tibiæ asperate instead of spinulose, with two spurs at the end.

This genus has been placed by Lameere in the group *Cleomenini*, but as it has the acetabula of the middle coxæ open to the epimera and the acetabula of the front coxæ angulate on the outer side, it cannot rightly enter into that group. The structure of the abdomen in both sexes resembles that of *Merionœda*, and in all other points, the length and form of the elytra excepted, there is a rather close resemblance between the two genera.

190. **Kunbir telephoroides**, *Lameere, Ann. Soc. Ent. Belg.* 1890, *C. R.* p. ccxiii.

♂. Testaceous red, nitid; antennæ, apex of elytra, abdomen,

clavate portions of the hind femora and the hind tibiæ and tarsi black. Head sparsely punctured. Antennæ a little shorter than the body, the last seven joints very slightly dilated; third joint shorter than the first or fourth; fourth shorter than the fifth. Prothorax with a feeble tubercle on each side and three on the disc—one postero-median very small, the other two lateral somewhat larger. Elytra distinctly but not very closely punctured, the punctures subseriate in places; the dark apical area, which is slightly tinged with blue, sparsely and very feebly punctate. Body, legs, and base of antennæ furnished sparsely with longish erect hairs. First sternite of abdomen as long as the second and third, the second as long as the third and fourth united.

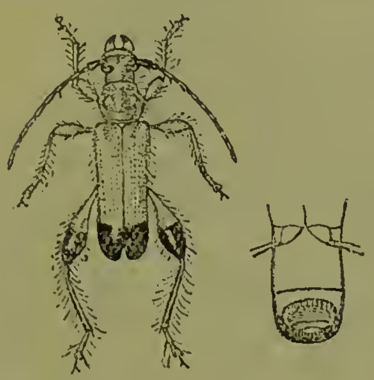


Fig. 69.—*Kunbir telephoroides*, Lameere, ♀. × $\frac{2}{1}$.

♀. Body beneath entirely testaceous. Antennæ extend only a little past the middle of the elytra. First sternite of the abdomen longer than the rest of the abdomen; second short, arcuately emarginate posteriorly, fringed with hairs; third and fourth depressed, the third more or less completely hidden by the second; fifth broadly sinuate at the apex, the pygidium extended a little beyond it.

Length 7–9; *breadth* 2–2¼ mm.

Hab. Central India: Chutia Nagpur.

Group *ROSALIINI*.

Head exserted; antennal tubercles short, emarginate; eyes lateral, finely facetted, broadly and deeply emarginate; gula with very short mentigerous process. Prothorax feebly tuberculate or unarmed at the sides. Scutellum small. Elytra generally long. Front coxæ subglobular, not prominent, more or less angulate on outer side; their acetabula open posteriorly. Acetabula of middle coxæ extended to epimera. Vein Cu 1 of hind wings simple, Cu 2 absent.

Most of the genera belonging to this group are found in America. Two only occur in the Oriental Region, one of these is represented also in Europe, Japan, and North America.

Synopsis of Genera.

A. Hind legs of moderate length, their femora not extended past apex of elytra .... ROSALIA, p. 176.

B. Hind legs very long, their femora extended considerably past apex of elytra, their tibiæ foliaceous in distal half .... CALLICHROMOPSIS. [p. 180.

Genus ROSALIA.

Rosalia, *Serville, Ann. Soc. Ent. Fr.* ii, p. 561 (1833); *Lacord. Gen. Coléopt.* ix, p. 33 (1869); *Lameere, Ann. Soc. Ent. Belg.* xxxi p. 171 (1887).

Eurybatus, *Thoms. Essai Classif. Ceramb.* p. 250 (1860); *Lacord. Gen. Coléopt.* ix, p. 32 (1869).

Type, *R. alpina*, Linn., a Palæarctic species.

Range. Palæarctic and Indo-Malayan Regions, and North-West North America.

Head with the fore-part and mandibles sloped forward; the front sub-vertical, raised between the antennæ so as to form a transverse ridge concave in the middle; eyes moderate, finely facetted and very deeply emarginate; genæ long and rather prominent; palpi subequal. Antennæ much longer than the body in the ♂, a little longer or shorter than the body in the ♀; first joint clavately thickened towards apex; third equal to or longer than the fourth; fifth to tenth subequal or successively and very slightly shorter in length; third to fifth thickened and spined at the apex, and sometimes, with one or more of the succeeding joints, furnished with a dense tuft of hairs at the apex. Prothorax transverse, rounded or protuberant at the sides. Elytra long, rounded at the apex. Legs moderately long; femora more or less thickened at, or below, the middle, the hind pair not reaching to the apex of the elytra; first joint of hind tarsus as long as the next two joints united. Front coxæ strongly angulated outwards; acetabula widely open posteriorly; intercoxal process raised and rather narrow in the middle, shortly deflexed posteriorly. Mesosternum canaliculate posteriorly; epimera large, extending broadly to the coxæ. Episterna of metathorax broad, narrowed and pointed posteriorly.

The body is densely covered with pubescence, with a characteristic colour in each of the two sections of the genus. One of these sections corresponds to the genus *Rosalia* of Serville and Lacordaire, the other to the genus *Eurybatus* of Thomson.

I. *Pubescence pale blue or bluish-grey with black bands and spots; antennæ with strong tufts of hairs at apices of joints third to sixth or eighth in both sexes; mandibles of fully-developed males with dorsal tooth near base.* (Subgenus ROSALIA.)

191. **Rosalia lameerei**, *Brongn. Bull. Soc. Ent. Fr.* 1890, p. cxxi; *Le Nat.* xii, p. 153, fig. ♂ & ♀ (1890); *Nouv. Archiv. du Muséum* (3) iii, p. 243, pl. 10, figs. 7 & 8 (1892).

Closely covered above with very short pale lavender-blue pubescence varied with spots and bands of black pubescence. Head

black; the sides sparsely punctate, glabrous and glossy; the front minutely, and the vertex more strongly, punctulate, both faintly pubescent; mandibles vary in the male according to the size and development of the individual—in large males they are rather long and horizontal, furnished each with a strong dorsal ridge and a tooth near the base; in smaller males obliquely inclined as in the female, with the dorsal tooth small or even entirely absent. Antennæ longer than the body by the last five joints in the ♂ and the last four in the ♀; pale blue, with the first two joints entirely and the rest at the apex black; third to sixth strongly, and some of the succeeding joints feebly, tufted with black hairs at the apex. Prothorax rounded at the sides, slightly narrowed towards the base; the disc with a large black spot that extends from the middle to the front margin and spreads out in front, also a small round black spot on each side. Scutellum blue. Elytra marked each with four large transverse spots or bands—one at the base, the second at one-fourth from base, the third just behind the middle, and the fourth a little before the apex. Body beneath for the most part pale blue, with the mesothorax almost wholly black. Legs black; the femora, which are gradually thickened and subfusiform towards the apex, with a pale blue ring or spot on the thickest part; hind tibiæ dilated and fringed with hairs at the apex; middle and hind tarsi pale blue above.

Fig. 70.—*Rosalia lameerei*, Brongn., ♂. × ⅚.

Length 16–28; *breadth* 4–7 mm.

Hab. Burma: Ruby Mines, North Chin Hills; Siam.

II. *Pubescence vermilion, with black spots and bands; antennæ without strong tufts of hair except in the ♀ of one species; mandibles without dorsal tooth in ♂.* (Subgenus Eurybatus.)

A. *Body beneath entirely black; femora fusiform or sublinear.*

192. **Rosalia lateritia**, *Hope* (Lamia), *Gray's Zool. Misc.* p. 27 (1831); *Lameere, Ann. Soc. Ent. Belg.* xxxi, p. 165, pl. 3, fig. 3 (1887).

Body beneath black; head black, sometimes with two red spots on the vertex; pronotum and elytra red, the latter frequently with a small spot or band under each shoulder, and rarely a small lateral spot at the middle, especially in the ♂. Antennæ of ♂ extending by the last four joints beyond the apex of the elytra; first joint finely shagreened; third and fourth subequal; third to

fifth subasperate, angulate at the apex; antennæ of ♀ shorter than the body, third to fifth joints dilated at the apex and furnished there with a strong tuft of hairs. Prothorax globose at the sides in the ♂, feebly tuberculate in the ♀; disc with a small velvety tubercle on each side, more pronounced in the ♀. Scutellum black, sometimes with two red spots. Femora with a subfusiform thickening below the middle. Intercoxal processes of pro- and mesosterna rather broad.

Length 25–32 mm.

Hab. Himalayas; Travancore; Burma; Indo-China.

193. **Rosalia gravida,** *Lameere, Ann. Soc. Ent. Belg.* xxxi, p. 166, pl. 3, fig. 4 (1887).

Black beneath; head black; pronotum and elytra vermilion; elytra strongly dilated posteriorly, marked each with a black spot at the middle and often with another smaller one under the shoulder. Antennæ of ♂ extended by the last four joints beyond the apex of elytra; third joint slightly longer than fourth; third to fifth with a small recurved spine at the apex of each posteriorly; antennæ of ♀ longer than the body; joints third to fifth dilated, strongly angulate at the apex and thickly covered there with pubescence. Prothorax globularly rounded at the sides in the ♂, subtuberculate there in the ♀; disc with a small velvety black tubercle, more pronounced in the ♀, on each side. Elytra dilated from the middle backwards and regularly rounded posteriorly. Femora sublinear, slightly thicker in the middle.

Length 23 mm.

Hab. Sikhim: Darjeeling.

194. **Rosalia hariola,** *Thoms.* (Eurybatus) *Essai Classif. Ceramb.* p. 250 (1860); *Lameere, Ann. Soc. Ent. Belg.* xxxi, p. 166, pl. 3, fig. 5 (1887).

Body beneath black; head black, sometimes with two red spots above; pronotum and elytra red, marked with black spots—three on the pronotum and five on each elytron. Antennæ of ♂ longer, by the last four joints, than the body; first joint rugulose; third to fifth subasperate, armed each with a recurved spine at the apex; antennæ of ♀ almost as long as the body, joints third to fifth dilated, strongly angulate, and densely pubescent at the apex. Prothorax globose and feebly tuberculate at the sides in the male, somewhat uneven at the sides in the female; disc with a postero-median and two smaller lateral velvety black spots, each of the lateral spots surrounds the base of a small conical tubercle. Scutellum black, sometimes with two red spots. Elytra slightly dilated posteriorly, each with five black spots—one at the shoulder, two, one of which is discal the other submarginal, at one-fourth from the base, a discal spot at the middle, and a lateral spot,

sometimes wanting, between the middle and apex. Femora sublinear, slightly thicker below the middle, subnitid, finely and rather densely punctulate, the punctures with short setæ.

Length 24–36 mm.

Hab. Sikhim: Darjeeling, Pedong; Calcutta.

B. *Body beneath red in part; femora subclavate.*

a. *Abdomen black.*

195. **Rosalia decempunctata,** *Westw.* (Purpuricenus) *Cab. Or. Ent.* p. 59, pl. 29, fig. 2 (1848); *Lameere, Ann. Soc. Ent. Belg.* xxxi, p. 167, pl. 3, fig. 6 (1887).

Body beneath, except the prosternum, black; the prosternum red, with the intercoxal part and a triangular spot on each side black; head black, sometimes with two red spots above; pronotum and elytra red, the first with four, or sometimes only three, and the latter with a variable number of black spots. Antennæ of ♂ extend by their last three joints beyond the apex of the elytra; first joint sparsely punctulate; third slightly longer than fourth; third to fifth each with a blunt spine almost at right angles from the apex, the spine on the third joint strongest; antennæ of ♀ shorter than the body, joints third to fifth dilated, densely pubescent and subspinose at the apex. Prothorax globose at the sides in both sexes; the disc with a tubercle on each side in the female, without it in the male; marked with four black spots, two median and two lateral, the anterior median spot sometimes absent. Elytra each with from two to five black spots—two dorsally placed, one at the middle and the other midway between it and the base, one small lateral spot at about one-fifth from the base, one dorso-lateral between the middle and apex; in addition to these there is sometimes a small black spot at the base close to the scutellum; the median dorsal spot is generally present, but any or all of the other spots are liable to disappear. Femora subclavately thickened below the middle, sparsely punctulate and more or less nitid. Intercoxal processes of pro- and mesosterna narrow.

Length 20–35 mm.

Hab. Sikhim: Darjeeling, Pedong; Assam; Java; Borneo.

196. **Rosalia læta,** *Lameere, Ann. Soc. Ent. Belg.* xxxi, p. 168, pl. 3, fig. 7 (1887).

Body beneath black, with the prosternum orange-red except between and around the coxæ; head black, sometimes red on top; pronotum orange-red with three or four black spots—two median and two lateral, the antero-median spot very small and often wanting, the postero-median sometimes replaced by two small points; elytra orange-red, each with four black spots—two placed obliquely, one dorsal and one lateral, at one-fourth or so from the base, the third, dorsal, at the middle, the fourth a little behind

the middle and a little nearer to the side. Antennæ of ♂ longer than the body by their last two joints; first joint sparsely punctulate; third longer than fourth; third to fifth armed each with a straight blunt spine at the apex, the spine on the third strongest; antennæ of ♀ reaching to posterior third of the elytra, joints third to fifth dilated, spined and densely pubescent at the apex. Prothorax globose at the sides in both sexes; the lateral black spots of the disc mark each the position of a small tubercle which is distinct in the female, but almost obsolete in the male. Femora subclavately thickened below the middle. Intercoxal processes of pro- and mesosterna narrow.

Length 25–34 mm.

Hab. Tenasserim; Java.

b. *Abdomen red, with last segment, only, black.*

197. **Rosalia formosa**, *Saund.* (Cerambyx) *Trans. Ent. Soc. Lond.* ii, p. 178, pl. 16, fig. 4 (1839); *Lameere, Ann. Soc. Ent. Belg.* xxxi, p. 170, pl. 3, fig. 9 (1887).

Body beneath red, with the last ventral segment, the whole of the mesothorax, and the coxal borders of the prothorax and metathorax black; head black; pronotum red, with three or four black spots; elytra red, with a broad black band at the base and another behind the middle, also two black spots, one dorsal and one lateral, placed obliquely on each between the bands. Antennæ of ♂ extending by more than the last four joints beyond the apex of the elytra; first joint nitid, rather sparsely punctulate; third slightly longer than the fourth; third to fifth or sixth armed each with a sharp oblique spine at the apex; antennæ of ♀ longer than the body; joints third to fifth spined and densely covered with pubescence at the apex. Prothorax globose and, in the female, slightly tuberculate at the sides; disc with four black spots, two median and two lateral, the antero-median spot small and subject to disappear; each of the lateral spots marks the position of a small conical tubercle, which is more distinct in the female. Femora subclavately thickened below the middle, sparsely and feebly punctulate, and nitid. Intercoxal process of prosternum and mesosternum narrow.

Length 21–40 mm.

Hab. The Himalayas; Sikhim: Darjeeling; Barrackpore; Assam.

Genus CALLICHROMOPSIS.

Callichromopsis, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 255 (1863); *Lacord. Gen. Coléopt.* ix, p. 31 (1869).

Type, *C. telephoroides*, Westw.

Range. Ceylon.

Head slightly raised and transversely concave between the antennæ; vertex sloped gradually from the occiput; front sub-

vertical, separated from the clypeus by a fine transversely arcuate impression; eyes finely facetted, emarginate, with the lower lobe rounded, the upper narrow; maxillary lobes elongate, with brush of hairs at the end; last joint of palpi triangular. Antennæ of ♀ nearly one-third longer than the body; third joint the longest, almost twice as long as the first; fifth a little longer than fourth and shorter than third; sixth to tenth slightly thickened and gradually shorter, each denticulate in front at the apex; third to fifth feebly spined posteriorly at the apex; eleventh a little longer than the tenth. Prothorax as broad as long, slightly rounded at the sides, marked with a transverse groove near base and apex. Elytra much broader than the prothorax, slightly narrowed backwards, broadly truncate at the apex, scarcely more than twice as long as their width across the base. Legs long; the hind pair very long, with the femora extended by half their length beyond the apex of the elytra; the tibiæ spatulately dilated in their distal half, and the first joint of the tarsus much longer than the remaining joints united. Front coxæ rounded, their acetabula slightly angulate outwards, open posteriorly. Episterna of metathorax moderately broad except near the apex, where they are abruptly narrowed and marked with a pit-like depression.

198. **Callichromopsis telephoroides**, *Westw.* (Cerambyx) *Cab. Orient. Ent.* p. 59, pl. 29, fig. 1 (1848); *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 255 (1863).

Body above and below orange-red, with rather more than the apical third of the elytra black; antennæ black, with the seventh and eighth joints pale yellow; legs black, with almost the whole of the front femora and the basal half or third of the middle and hind femora fulvous. Head finely and closely punctured, somewhat dull above, subnitid in front. First antennal joint finely and very closely punctate; the third and a few of the following joints sparsely fringed with hairs beneath. Prothorax closely covered with broad shallow punctures, the interstices formed into a fine reticulation; sparsely clothed with erect tawny pubescence. Elytra very closely and rather finely punctate, feebly convex above; the anterior red part clothed with tawny pubescence, and the black part with very short black pubescence. Body beneath with a short silky pubescence, that has a golden lustre in certain lights.

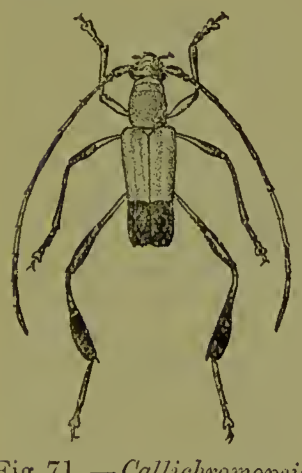


Fig. 71.—*Callichromopsis telephoroides*, Westw. × ⅞.

Length 14–15; *breadth* 4 mm.

Hab. Ceylon.

Group *MYTHODINI*.

Head exserted; eyes lateral, finely facetted, entire, prominent, oval or rounded; antennæ approximated at base, inserted between the eyes, as far from them as from one another, certain of the joints tufted with hairs. Prothorax longer than broad; the sides rounded in the middle, feebly or not tuberculate. Mesonotum without stridulatory area. Front coxæ globular, not prominent; their acetabula angulate on the outer side, narrowly open posteriorly. Acetabula of middle coxæ extended to epimera. Femora pedunculate and clavate. Vein Cu 1 of hind wings simple, Cu 2 absent.

This small but remarkable group comprises only three genera, two of which occur in the Malay Peninsula, the third in Northern India and Upper Burma. In two of the genera (*Mythodes* and *Phyodexia*) the metathoracic episterna have each a small deep fovea near the hinder end. These foveæ are in all probability scent-pores, notwithstanding their position, which is less close to the metasternal sutures than in other groups.

Genus **PHYODEXIA**.

Phyodexia, *Pascoe, A. M. N. H.* (4) viii, p. 273 (1871).

Type, *P. concinna*, Pascoe.

Range. That of the type species.

Front of head sloped, subquadrate; antennal supports approximated, very slightly raised; eyes rather small but prominent, entire, hemispherical. Antennæ shorter than the body; first joint clavate, slightly curved, longer than the second and third united; fourth and sixth longer, fifth shorter, than the third, all three furnished with long tufts or brushes of hair; seventh to tenth short, subequal; eleventh appendiculate, longer than the tenth. Prothorax longer than broad, sulcately constricted near the base and apex; disc swollen and strongly convex towards each side, slightly depressed along the middle. Mesonotum without stridulatory area. Elytra about two and a half times as long as broad, subtruncate at the apex. Intercoxal process of prosternum feebly arched, scarcely dilated posteriorly, not reaching to the epimera. Femora pedunculate at the base, abruptly clavate near the apex, the hind pair reaching beyond the apex of the elytra. Front coxæ globular, not prominent, slightly angulate on the outer side.

199. **Phyodexia concinna**, *Pascoe, A. M. N. H.* (4) viii, p. 273, pl. 13, fig. 2 (1871).

Black, with the elytra steel-blue varying to violet, and the legs and basal joints of the antennæ reddish, furnished above and below with some sparsely scattered long erect hairs. Head closely punctured above between and around the eyes, less closely on its hinder part. Second joint of antennæ with a long narrow tuft of hairs on one side, third with a similar tuft at the apex, fourth, fifth and sixth almost completely surrounded with brushes of black hair, seventh and eighth joints angulate at the apex in front. Prothorax strongly and very closely punctured, except on the thickened front edge of the anterior transverse groove. Elytra less strongly and less closely punctured; sparsely pubescent. Body beneath distinctly but not closely punctured, sparsely pubescent; episterna of metathorax marked each with a small deep pit (in all probability a scent-pore) near its hinder end.

Fig. 72. *Phyodexia concinna*, Pasc. × ¼.

Length 14–15; *breadth* 4 mm.

Hab. Himalayas: Mussooree, Darjeeling, Bhutan; Assam: Patkai Mts. (*Doherty*); Upper Burma: Maymyo (*Col. Bingham*).

Group *PURPURICENINI.*

Head moderately exserted; eyes finely facetted, broadly and deeply emarginate; antennal supports emarginate; front vertical or inclined. Antennæ much longer as a rule than the body in the ♂, shorter than the body in the ♀, in this sex often thickened towards the apex. Prothorax generally tuberculate at the sides. Scutellum rather long, triangular, acute at apex. Front coxæ globular, not angulate on the outer side, their acetabula open posteriorly. Acetabula of middle coxæ extended to epimera. Metathorax with scent-pores. Wings with vein Cu 1 usually simple, Cu 2 absent.

Several genera, mostly American, belong to this group. Two only are included in the Indian fauna.

Synopsis of the Genera.

Front of head vertical, narrowly concave between antennæ, latter not very widely separated	PURPURICENUS, p. 184.
Front of head inclined, nearly flat between antennæ, latter very widely separated . .	EURYPHAGUS, p. 187.

Genus **PURPURICENUS.**

Purpuricenus, *Latrielle, Règne Anim.* ed. 2, v, p. 114 (1829); *Serville, Ann. Soc. Ent. Fr.* ii, p. 568 (1833); *Lacord. Gen. Coléopt.* ix, p. 177 (1869).

Cyclodera, *White, Stokes's Voy., App.* i, p. 510 (1846).

Philagathes (*Thoms.*), *Lacord.* (in part) *Gen. Coléopt.* ix, p. 176 (1869).

Type, *P. desfontainei*, Fabr., a European species.

Range. Chiefly Palæarctic and Nearctic, with a few species in each of the other great regions, excepting the Neotropical.

Head more or less distinctly concave between the antennal supports; the latter acute and somewhat prominent on the inner side; front vertical, transverse, post-clypeus short with thickened front edge, ante-clypeus (or epistome) membranous; eyes deeply emarginate; genæ moderately long; mandibles short. Antennæ of the ♂ longer than the body by from one-fourth to half or more than half of their length; third joint a little longer than the fourth, fourth to tenth subequal in length; eleventh appendiculate, longer than the tenth, gradually attenuated towards the end; antennæ of ♀ either shorter or a little longer than the body, with the joints from the fifth to the tenth successively and gradually shorter, broader than in the ♂, and angulated at the apex on the anterior side; eleventh very little, or not at all, longer than the tenth. Prothorax transverse, with a conical tubercle at the middle of each side. Scutellum triangular, acute at the apex. Elytra moderately long, regularly convex, more or less parallel-sided, rounded at the apex. Femora subclavate, the hind pair extended nearly to the apex of the elytra, rarely beyond it, in the ♂; tarsi more or less broad, the first joint in the hind pair shorter as a rule than the second and third united. Acetabula of the front coxæ rounded on the outer side, open posteriorly; the intercoxal process vertical or subvertical, sometimes tuberculate, posteriorly. Intercoxal process of mesosternum emarginate posteriorly, usually furnished with a small tubercle near the end.

200. **Purpuricenus sanguinolentus**, *Oliv.* (Cerambyx) *Entom.* iv, No. 67, p. 93, pl. 20, fig. 155 (1795); *Lacord.* (Philagathes) *Gen. Coléopt.* ix, p. 176, note 2 (1869).

Black, with two broad, bright red, or sometimes pale yellow, bands across the elytra, one at the base, the other wholly or in its

greater part behind the middle; these bands vary considerably in width; in some specimens the black band between them is nearly or quite as wide as the basal band, in others it is much narrower, sometimes it is reduced to a transverse spot on each elytron, the red bands united along the sides and suture. Head very densely punctate. Antennæ nearly twice as long as the body in large males, with the first joint densely punctulate, and marked with a feeble pit near the base; the eleventh, which has a long and distinct appendix, more than twice as long as the tenth; scarcely extended past the middle of the elytra in the ♀, the joints from the fifth to the tenth successively wider as well as shorter, the eleventh barely longer than the tenth. Prothorax of the ♂ very finely and very densely punctate, and opaque, but with a more coarsely punctured and less opaque area that forms a narrow transverse band at the base from which a short median lobe and two much longer and broader lateral lobes are given off in front; prothorax of ♀ very densely and rather strongly punctured over the whole of the upper surface. Elytra finely and rather densely punctulate on the red areas, very densely and somewhat less finely punctulate on the black parts. Femora thickly and rather strongly punctate. First joint of the hind tarsi much shorter than the next two united. Intercoxal process of prosternum truncate or slightly tuberculate posteriorly, that of the mesosternum with a small conical tubercle.

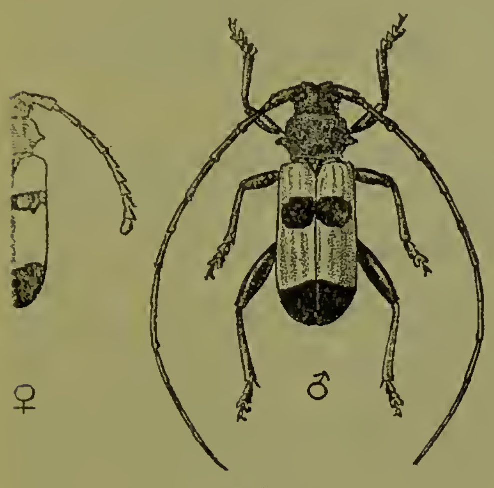


Fig. 73.
Purpuricenus sanguinolentus, Oliv.

Length 12–21; *breadth* $3\frac{1}{2}$–$7\frac{1}{2}$ mm.

Hab. Ceylon; India: Trivandrum, Madras, Poona, North Bengal.

The Sunda Islands are mentioned by Lacordaire as the habitat of this species, but probably in error. Olivier himself did not know the locality from which his specimen came. Of the specimens which I have seen, those from Ceylon agree best in the colour and extent of the elytral bands with the figure which he has given.

201. **Purpuricenus malaccensis,** *Lacord.* (Philagathes) *Gen. Coléopt.* ix, p. 176, note 2 (1869).

Purpuricenus fasciatus, *Brongn. Nouv. Archiv. du Mus.* (3) iii, p. 241, pl. 10, fig. 5 (1891).

Very like *P. sanguinolentus*, Oliv., but with the transverse bands of the elytra narrower, and generally of a much paler, yellowish-

white colour; the antennal supports more prominent on the inner side, and the first antennal joint in the male marked with a deeper pit or excavation at the base. A difference also is to be observed in the shape and extent of the coarsely punctured area on the prothorax of the male; this area has no median lobe in front, but extends farther forwards from the base than does the corresponding area in *P. sanguinolentus*.

Length 12–24; *breadth* 3½–8 mm.

Hab. Assam: Sylhet; Burma: Ruby Mines (*Doherty*), Bhamo, Teinzo and Thagata (*Fea*); Siam; Malay Peninsula; Sumatra; Java.

202. **Purpuricenus hausskneehti**, *Witte, Berl. ent. Zeit.* xv, p. 207 (1871).

Purpuricenus haussnechti, *var.* aleppensis, *Witte, l. c.* p. 208 (♂).

♂. Black; prothorax with a red spot of variable size on the middle of the disc, sometimes also with a red spot on each side united by a red band with the discal spot; elytra with a broad red band across the middle widened from the suture towards the outer margin, and extended anteriorly to a greater or less extent as a marginal band. Head closely and somewhat roughly punctured; the antennal supports raised and acute on the inner side. Antennæ longer than the body, with the last joint longer than the penultimate and tapered towards the end. Prothorax closely, strongly, and roughly punctate above, as closely but less strongly punctured at the sides and beneath; with a small post-median tubercle on the disc, and a short post-median tubercle on each side. Elytra very closely punctured, the punctures gradually smaller as they recede from the base.

♀. Prothorax red above, with the front and hind borders narrowly black. Antennæ not longer than the body.

Length 12–23; *breadth* 4–7 mm.

Hab. Kashmir; Punjab; Turkestan.

203. **Purpuricenus montanus**, *White, Cat. Col. B. M., Longic.* p. 138 (1853); *id. P. Z. S.* 1850, pl. 8.

Relatively long and narrow for this genus; variable in colour, sometimes entirely black, most commonly black with the outer borders of the elytra to a greater or less extent red; in some specimens the elytra are red with a broad black band along the middle of each, and the prothorax is marked with a red spot or band on each side in front of the lateral spine. Head, prothorax, and elytra densely rugose-punctate; the prothorax sometimes with a small smooth narrow callosity in the middle. Antennæ twice or nearly twice as long as the body in the ♂, shorter than the body in the ♀. Prothorax with a small acute tubercle on each side. Elytra long, parallel-sided, rounded at the apex. Femora sublinear, very slightly thickened in the middle; first joint of hind tarsus shorter than the next two joints united.

Length 11–16; *breadth* 3–4½ mm.

Hab. West Kashmir; Campbellpore; Himalayas; Tibet.

Genus EURYPHAGUS.

Eurycephalus, *De Casteln. Hist. Nat. Col.* ii, p. 430 (1840) (name preoccupied).
Euryphagus, *Thoms. Syst. Ceramb.* p. 196 (1864); *Lacord. Gen. Coléopt.* ix, p. 174 (1869).

Type, *E. maxillosus*, Oliv.

Range. Oriental Region.

Sexual differences strongly marked. *Male.* Head very broad, exceeds in width the widest part of the prothorax; the antennal supports very widely separated and laterally prominent; the front sloped gradually from the vertex, impressed along the middle, and marked off from the clypeus by a transverse impression; the clypeus large and transverse, extended anteriorly some distance in front of the base of the mandibles, with its sides oblique; eyes small, deeply and broadly emarginate; genæ long, with a crest or ridge at their junction with the front and clypeus, their lower front angle sharp and prominent; mandibles long, curved, circumscribing a wide semicircular space, gradually narrowed towards the apex, each bifid at the end. Antennæ longer than the body; third joint longer than the fourth; fifth to tenth successively and gradually shorter and narrower; eleventh subelongate, gradually narrowed at the end, sparsely setose beneath; third joint near the apex, and fourth to tenth along their whole length, furnished with two poriferous grooves separated by a fine carina. Prothorax transverse, widest across the middle and there furnished on each side with a small tubercle, strongly narrowed thence in straight or very feebly curved lines towards base and apex; constricted and transversely grooved near the base. Scutellum in the form of an elongated triangle with acute apex. Elytra short, moderately convex, obtusely rounded posteriorly, the shoulders oblique. Femora fusiform-clavate, the hind pair extended a little past the apex of the elytra; tarsi rather short and broad, the first joint only a little longer than the second, even in the hind tarsus. Acetabula of front coxæ very slightly, sometimes not at all, angulated on the outer side, open posteriorly; intercoxal process rather broad, subvertical posteriorly, furnished with a small conical tubercle in front of the angle. Acetabula of middle coxæ extend to the epimera; mesosternum emarginate posteriorly, with a rather strong conical tubercle in front of the emargination.

Female. Head somewhat similar in structure to that of the male but very much smaller, with the cheeks less prominent, the mandibles short and simple at the apex. Antennæ shorter than the body, with the joints from the fourth more dilated than in the male, the eleventh shorter than the tenth. Legs shorter than in the male, the tarsi not nearly so broad.

204. **Euryphagus lundii**, *Fab.* (Cerambyx) *Ent. Syst.* i, 2, p. 258, ♀ (1792).

Cerambyx nigripes, *Oliv. Entom.* iv, No. 67, p. 52, pl. 20, fig. 149, ♀ (1795).

♀. Head, prothorax above and below and the anterior two-thirds of the elytra carmine-red; scutellum, apical third of the elytra and body beneath, excepting the prothorax, black; legs and antennæ black or dark brown, with the first antennal joint more or less red at the base. Head glabrous and opaque; faintly reticulate-punctate above. First joint of antennæ densely and very finely punctulate, the others very faintly covered with dark pubescence. Prothorax opaque, covered with very fine delicate ridges which run together so as to form a reticulation; the disc strongly raised in the middle and furnished with three more or less glossy tubercles; the median tubercle narrow, elongate and impunctate, the lateral two, which lie a little in front of the middle, rounded and punctate. Scutellum rugulose-punctate. Elytra entirely opaque, rather densely punctate, the punctures visible only on the red anterior portion, not on the posterior black part, the latter rather densely covered with very short black pubescence. Mesothorax, metathorax and abdomen covered faintly with grey pubescence. Legs glabrous, glossy, very minutely and very sparsely punctulate.

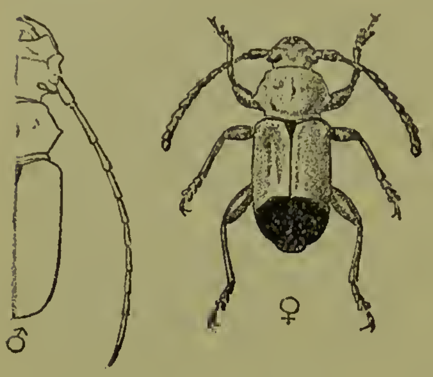


Fig. 74.
Euryphagus lundii, Fab.

♂. Head and prothorax of a dull red, slightly purplish, colour; elytra entirely fulvous-red; scutellum black; antennæ glossy, the first joint red, the rest black; body beneath dull red, with the sides of the meso- and metathorax black; femora red, except at the base; tibiæ and tarsi dark brown or black. Head subnitid at the sides, opaque above; the clypeus and occiput rather densely punctate, the front almost impunctate. First antennal joint sparsely punctate. Prothorax very densely rugulose-punctate; the disc less strongly raised than in the ♀, but similarly provided with three subnitid tubercles, and with an obtuse, feebly elevated ridge behind each of the dorso-lateral tubercles. Elytra less closely punctured than in the ♀. The male differs further from the female by the structural characters pointed out in the description of the genus. These characters, such as the great size of the head and mandibles, are most pronounced in large fully developed specimens, but are less obvious in males of minor development.

Length ♂ ♀ 13–22; *breadth* 5–8½ mm.

Hab. Assam; Burma: Ruby Mines (*Doherty*).

This species differs from *E. maxillosus*, Oliv., in the entirely red

prothorax in both sexes, and in the elytra of the males, which are without spots posteriorly. The males appear to be much less numerous in collections than the females, and those described above are considered to belong to the species because they have come from the same localities as some in the same collections.

Group *CALLICHROMINI.*

Head more or less distinctly raised between the antennæ; the clypeus rather large, prolonged anteriorly some distance beyond the base of the mandibles; eyes finely facetted, deeply emarginate, the lower lobes generally large, extending to the front; outer lobe of maxillæ long, with brush of hairs at the end; maxillary palpi usually longer than the labial. Prothorax generally tuberculate at the sides. Scutellum usually rather large, triangular in form, the sides straight or slightly curved, the apex acute. Front coxæ globular, not prominent; their acetabula rounded on the outer side, closed, or very nearly closed, posteriorly. Acetabula of middle coxæ extended to the epimera. Legs long or moderately long; their tibiæ compressed. Metasternum provided with scent-pores. Wings with vein Cu 1 simple, Cu 2 absent. Male with six visible ventral segments to the abdomen.

This group is well represented in the African and Oriental Regions, less well in Tropical America and by a few species only in the Holarctic and Australian Regions. The species as a rule are characterized by a metallic coloration, varied in some cases by yellow or fulvous bands or spots on the elytra.

Synopsis of the Genera.

A. Last four or five joints of antennæ narrower as a rule than those preceding them, sometimes slightly thicker; hind femora gradually thickened.
- a. Antennæ robust, as a rule not longer than body in ♂, usually in part yellow or fulvous.
  - *a'*. Head not narrowed and elongated below; antennæ much shorter than body in ♂.
    - *a*². Prothorax either unarmed or feebly tuberculate at sides; hind femora much shorter than abdomen ...... ZONOPTERUS, p. 190.
    - *b*². Prothorax strongly tuberculate at sides; hind femora almost as long as abdomen .... NIRÆUS, p. 193.
  - *b'*. Head narrowed and elongated below; antennæ subequal in length to body in ♂ .... PACHYTERIA, p. 194.
- b. Antennæ less robust, generally rather slender, longer as a rule than body in ♂, usually black or metallic.

a'. Antennæ very long in ♂, tapering towards end; hind femora extended considerably past apex of elytra .... CHLORIDOLUM, [p. 198.

b'. Antennæ never much longer than body in ♂; hind femora rarely, and then only slightly, extended so as to pass apex of elytra in ♂.

a². Elytra dehiscent, either very short or else considerably narrowed posteriorly .... NOTHOPEUS, p. 202.

b². Elytra normal, long.

a³. Prothorax tuberculate at the sides.

a⁴. Antennal joints from 5th or 6th to 10th dentate or spinose at apex.

a⁵. Hind femora not reaching to apex of elytra in ♂ ...... APHRODISIUM, [p. 205.

b⁵. Hind femora reaching to apex of elytra or slightly beyond it in ♂ .... CHELIDONIUM, [p. 210.

b⁴. Antennal joints not dentate at apex; hind femora not reaching to apex of elytra in ♂.... POLYZONUS, p. 213.

b³. Prothorax unarmed at sides...... ANUBIS, p. 220.

B. Last four or five joints of antennæ strongly dilated; hind femora subclavate........ IPOTHALIA, p. 222.

Genus ZONOPTERUS.

Zonopterus, *Hope, Trans. Linn. Soc.* xix, p. 110 (1843); *Lacord. Gen. Coléopt.* ix, p. 9 (1869).

Type, *Z. flavitarsis*, Hope.

Range. Indo-Malayan Region.

Head with the front and cheeks rather short, the clypeus large, prolonged below the base of the mandibles and membranous towards the end, the inter-antennal ridge slightly concave from side to side. Antennæ thick, shorter than the body in both sexes; joints first and third slightly angulate at the apex in front, fourth to tenth more distinctly angulate or sub-dentate, third nearly twice as long as the fourth, fifth to tenth very slightly diminishing in length, eleventh but slightly longer than the tenth and obtuse at the apex. Prothorax transverse, rounded or slightly protuberant at the middle of each side, constricted at the base. Elytra long, parallel-sided or nearly so, conjointly rounded at the apex. Femora rather stout, gradually thickened from before the middle to within a short distance of the apex, the hind pair not reaching to the apex of the elytra. First joint of the hind tarsus little or not longer than the next two joints united. Prosternum more or less strongly arched between the coxæ, gradually expanded posteriorly and somewhat emarginate at the end, where it reaches almost to the spine.

205. **Zonopterus flavitarsis**, *Hope, Trans. Linn. Soc.* xix, p. 111 pl. 10, fig. 7 (1843).

Black and dull above, with two yellow bands that cross the elytra, one about midway between the middle and the base, the other a very short distance behind the middle; the first band somewhat narrower than the second, which is variable in width but usually extends to about a fifth part of the whole length of the elytra; first four joints of the antennæ and the base of the fifth black, the rest fulvous; legs black and glossy, with the tarsi testaceous yellow; body beneath violaceous- or steel-blue, with the abdomen of the ♂ testaceous, that of the ♀ blue, the hind borders of the segments sometimes testaceous, in both covered with a faint silky pubescence. Head punctured strongly and less closely on the clypeus, finely and very closely on the front, more coarsely on the vertex. Antennæ stout, reaching almost to the middle of the second elytral band in the ♀, beyond it in the ♂. Prothorax slightly protuberant at each side just before the middle, finely and very closely punctured above, with a short velvety pubescence which more densely covers two patches on the anterior part. Scutellum closely punctulate, scarcely depressed in the middle. Elytra finely and very closely punctured, the punctures a little stronger and more prominent on the basal black band, but there and elsewhere more or less obscured by a covering of very short pubescence. Femora closely and distinctly punctured.

Fig. 75.
Zonopterus flavitarsis, Hope. × $\frac{5}{6}$.

Length 21–35 mm.

Hab. Assam: Sylhet, Khasi Hills, Shillong.

206. **Zonopterus consanguineus**, *Ritsema, Notes Leyd. Mus.* xi, p. 10 (1889).

Closely allied to and very like *Z. flavitarsis*, but differs as follows: First five or six joints of the antennæ black; the anterior yellow band of the elytra somewhat narrower. Prothorax more regularly rounded at the sides. Scutellum narrower, depressed along the middle with the edges raised, much less densely punctulate. Femora more finely and less closely punctured.

The elytra in this species sometimes show a decidedly bluish tint, especially near the apex.

Hab. Himalayas (?); Southern India: Bangalore, Malabar.

207. **Zonopterus redemanni**, *Nonfried, Deut. ent. Zeit.* xxxv, p. 275 (1892).

♀. Dark blue or violaceous-blue above, somewhat glossy, nearly bare of pubescence; with two yellow bands that cross the elytra, the first nearly midway between the base and the middle, the second a very short distance behind the middle; first five or six joints of the antennæ black, the rest tawny; body beneath steel-blue, glossy, very faintly pubescent; legs black or bluish black, with the tarsi testaceous yellow. Puncturation of the head, prothorax, and elytra very much as in *Z. flavitarsis*, Hope, but a little stronger and more conspicuous owing to the absence of a tomentose covering. Prothorax transverse, slightly protuberant at the middle of each side; the disc with a slight transverse prominence on each side just in front of the basal constriction and with two feeble tubercles, more finely punctured than the rest of the surface, near the apex. Femora finely and rather sparsely punctate, the hind pair reach to a little beyond the hind border of the second elytral band.

Length 35-40; *breadth* 10-10¼ mm.

Hab. Ceylon.

In general form and structure this species comes very near *Z. consanguineus*, and is chiefly distinguishable from it by its larger size, by the upper surface which is almost bare of pubescence, and the puncturation, which is consequently much more distinctly visible. The author of the species has described the prothorax as elongate and strongly convex, but in the female at least the width across the middle is a little greater than the median depth, and the disc is not more convex than in other species, rather the reverse.

208. **Zonopterus corbetti**, sp. n.

Dark metallic green or blue, with two broad yellow bands of variable width on the elytra; legs black, with the tarsi testaceous; last five joints of the antennæ testaceous; the yellow elytral bands in some specimens coalesce at the sides and suture and are so much extended that the elytra may be described as yellow, with the apical fourth, a narrow band at the base, and a transverse spot just before the middle of each, dark blue; in other specimens the yellow bands are not broader than the sub-median blue band which separates them, and become slightly narrower towards the suture; the basal blue band and the sub-median band are slightly pointed posteriorly at the suture. Head closely and rather finely punctured. Antennæ not so thick as usual for this genus, reaching to a little beyond the middle of the elytra in both sexes; joints fifth to tenth feebly angulate in front at the apex. Prothorax closely and finely punctured above, sparsely beneath in the ♀, very densely beneath in the ♂. Elytra also finely and very closely punctured. Breast and abdomen with a fine grey

pubescence, with silvery reflections in certain lights. Fifth and sixth abdominal segments sinuate posteriorly in the male, the sixth somewhat testaceous in the middle.

Length 24; *breadth* 5½ mm.

Hab. Burma: Tharawaddy (*Corbett*).

209. **Zonopterus diversus**, sp. n.

Dark blue, for the most part dull; elytra yellowish or testaceous, covered faintly with fulvous-red pubescence, the apical fourth and a spot of variable size on the disc of each before the middle, dark blue; antennæ with the first five joints dark blue, the rest black; body beneath dark blue, sometimes almost black, with a faint covering of black pubescence. Head finely rugulose-punctate above and on the front; the clypeus transversely but somewhat irregularly rugulose. Antennæ extended only a little past the middle of the elytra in the ♀; fourth and fifth joints narrower than the third, very slightly angulate at the apex; sixth to tenth broader, somewhat compressed, acutely angulate at the apex on the anterior side. Prothorax with a short obtuse tubercle at the middle of each side, densely rugulose-punctate above, somewhat transversely rugulose near the basal margin; its length a little greater than its width at the base. Scutellum subnitid. Hind femora moderately thickened, finely punctulate, extending in the ♂ up to and in line with the front border of the dark-blue apical area of the elytra. First joint of hind tarsus longer than the next two joints united. Intercoxal process of prosternum testaceous posteriorly, emarginate at the end, not reaching to the epimera; the acetabula distinctly open posteriorly.

Length 21–22; *breadth* 5 mm.

Hab. Ceylon.

Genus NIRÆUS.

Niræus, *Newman, Mag. Nat. Hist.* iv, p. 194 (1840).
Euchroa, *Guér. Deless. Souv. d'un Voy.* ii, p. 56 (1843).

Type, *N. tricolor*, Newm.

Range. That of the type species.

Though not considered distinct by Lacordaire, this genus differs from *Pachyteria*, Serv., by well-marked structural characters. The head is rather broad, and not narrowed and elongated in front; the clypeus is short, with a slight projection at the middle of its front margin; the membranous epistome rather broad and the labrum small; the mandibles are robust in the male, and differ in shape from those of *Pachyteria*—the outer border of each forms an almost continuous curve and each is armed with a strong tooth on the inner side. The antennæ are very thick like those of *Pachyteria* but much shorter, those of the male not extending past the middle of the elytra; they are gradually

narrowed from the fourth joint up to the apex. The acetabula of the front coxæ are open posteriorly.

210. **Niræus tricolor**, *Newman, Mag. Nat. Hist.* iv, p. 194 (1840).
Euchroa dimidiata, *Guér. Deless. Souv. d'un Voy.* ii, p. 57, pl. 14, fig. 1 (1843).

Head above and more or less in front, prothorax, and a broad band passing along the side of each elytron for a short distance from the base and then turned towards the suture, testaceous red; this band subnitid, strongly and densely punctured; the rest of the elytra bluish black, densely and finely punctulate, covered with dark tomentum; antennæ bluish black, with joints third to sixth pale yellow, subnitid; breast and abdomen steel-blue; legs dark blue. Head densely and rather strongly punctured, impressed with a median line which does not extend on to the vertex or clypeus; a transverse line separates the front and clypeus, the latter inclined forwards at an angle with the front. Prothorax densely punctured, its front margin rounded in the middle, the anterior and posterior transverse grooves rather shallow, the disc slightly raised on each side just in front of the posterior groove. Elytra gradually narrowed posteriorly, rounded at the apex. Body beneath faintly covered with silky greyish pubescence. Femora densely punctured, the punctures unequal in size; hind femora not reaching quite to the apex of the elytra in the male. Fifth ventral segment of male sinuate at the apex, the sixth slightly notched at the apex, impressed with a line along the middle.

Length 27–32; *breadth* 8–9 mm.

Hab. Tenasserim; Penang (?).

Genus PACHYTERIA.

Pachyteria, *Serville, Ann. Soc. Ent. Fr.* ii, p. 553 (1833); *Lacord. Gen. Coléopt.* ix, p. 10 (1869).

Type, *P. fasciata*, Fab.

Range. Oriental Region.

Head narrowed and more or less elongated below the eyes; raised so as to form a ridge, concave from side to side, between the antennæ; front oblique, the clypeus prolonged in front, ends in a narrow membranous epistome; mandibles narrowed downwards, obliquely inclined towards one another and abruptly incurved at the apex. Antennæ thick, about equal in length to the body in the ♂, shorter in the ♀; first joint more or less angulate in front at the apex, third much longer than the fourth; fifth to tenth successively shorter, each carinate in front and angulate at the apex; eleventh appendiculate, longer than the tenth. Prothorax constricted and transversely grooved near base and apex, dilated in the middle, and usually tuberculate at each side. Scutellum triangular, with the apex acute and more or less

prolonged. Elytra somewhat rounded at the shoulders, narrowed more or less strongly posteriorly, often obtusely rounded, sometimes truncate or emarginate at the apex. Legs rather long; the hind femora gradually thickened, reaching up to or beyond the apex of the elytra in the ♂; hind tibiæ compressed, gradually widened towards the apex. Intercoxal process of prosternum strongly arched in the middle, reaches almost to a level with the coxæ, and is dilated posteriorly so as to meet the epimera; that of the mesosternum broader and subhorizontal, slightly inclined in front. Abdomen of ♂ with six ventral segments visible, the last two more or less minutely emarginate posteriorly; that of the ♀ with five, the last one either rounded and entire or only feebly sinuate at the apex.

211. **Pachyteria superba**, *Gestro, Ann. Mus. Civ. Genova,* xxvi, p. 128 (1888).

Head, prothorax and scutellum violaceous and glossy; antennæ violaceous and glossy at the base, but somewhat black and opaque towards the apex; elytra pale yellow, with a somewhat velvety and opaque transverse band of a dark violaceous colour that extends for rather less than one-fourth of their length from the base, and a similar band that extends for about one-third of their length from the apex; the basal band with a somewhat sinuate hind margin, the apical band slightly angulate in the middle in front; body beneath of a fine violaceous-blue colour, with a delicate covering of silky grey pubescence; legs violaceous blue. Head punctulate and rugulose, its inter-antennary ridge strongly concave with the lateral angles prominent and acute. Prothorax rugose, marked with a strong transverse groove near the apex and another near the base; the disc with two ill-defined rounded areas of darker colour than the rest, and covered with short velvety pubescence. Elytra somewhat narrower at the base and more parallel-sided than in other species; the surface very finely and closely punctulate; each showing slight traces of three longitudinal costæ.

Length 35 mm.

Hab. Upper Burma: Bhamo (*Fea*).

212. **Pachyteria fasciata**, *Fab.* (Cerambyx) *Syst. Ent.* p. 168 (1775); *Oliv.* (Cerambyx) *Ent.* iv, no. 67, p. 19, pl. 1, fig. 4 (1795); *Ritsema, Notes Leyd. Mus.* xii, p. 164 (1890).
Pachyteria voluptuosa, *Thoms. Syst. Ceramb.* p. 568 (1865).

Dark metallic blue; with the last five joints of the antennæ (except at the apex of the last one) and a broad band that crosses the elytra just before the middle yellow; this yellow band nitid and rather strongly but not closely punctured, its front margin on each side slightly oblique and its hind margin sinuate, the band widest at the suture. Head distinct and rather closely

punctate, impressed with a median line that extends from the vertex to the clypeal front margin. Antennæ of ♂ almost as long as the body; first joint glabrous and closely punctured; the others closely and minutely punctulate, more or less densely covered with very short pubescence. Prothorax transverse, with a strong conical tubercle on each side, a deep transverse groove in front and two shallower grooves near the base; the disc and sides distinctly, but rather sparsely, punctured. Elytra densely and minutely punctulate, and covered slightly with short dark tomentum, except on the yellow band, where each of the punctures carries a short decumbent pale seta; each elytron narrowly subtruncate, or almost rounded, at the apex, sometimes very feebly emarginate. Breast and abdomen sparsely punctate, very faintly pubescent at the sides. Hind femora extending to the apex of the elytra in the ♂.

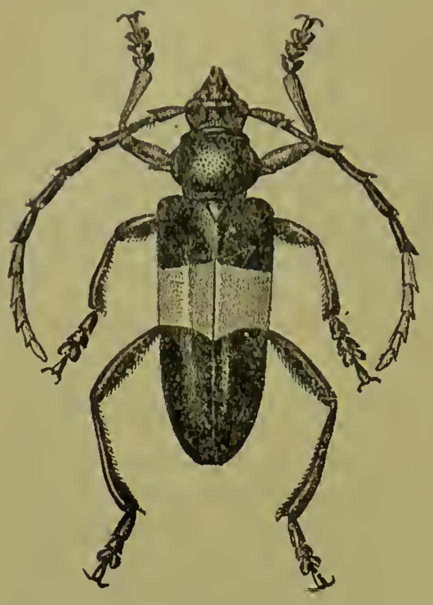


Fig. 76.—*Pachyteria fasciata*, Fab. × $\frac{6}{5}$.

Length 24–29; *breadth* 7–8½ mm.

Hab. Himalayas; Ranchi; Chutia Nagpur; Tranquebar; Ceylon; Siam.

213. **Pachyteria calumniata**, *Ritsema, Notes Leyd. Mus.* xii, p. 166 (1890).

Pachyteria fasciata, *Thoms.* (*nec Fab.*) *Syst. Ceramb.* p. 176 (1864).

Very like *P. fasciata*, Fab., but of a darker blue, almost black, colour; the transverse yellow band of the elytra narrower, more finely and much more closely punctulate, and its front and hind margins usually almost parallel; the median impressed line of the head not extended on to the clypeus, the latter with a raised line or carina along the middle; the apex of each elytron rounded; the metasternum and the sides of the abdomen covered with a dense silvery grey pubescence.

Length 24–29; *breadth* 7–8½ mm.

Hab. Southern India: Nilgiri Hills; Tranquebar; Java.

214. **Pachyteria dimidiata**, *Westw. Cab. Or. Entom.* p. 60, pl. 29, fig. 8 (1848).

Black above, slightly tinged on the posterior half of the elytra with dark blue or green; underside and legs dark blue; last six joints of the antennæ, and a broad band that crosses the elytra

before the middle, pale yellow; the antennal joints dull; the elytral band glossy, strongly and rather closely punctured, its hind margin straight, and its front margin somewhat oblique near the suture and sinuate towards the side, on each elytron. Head impressed with a median line or groove which does not extend on to the clypeus, but ends anteriorly at the transverse line that separates the clypeus and front; clypeus rather sparsely and somewhat unevenly punctured, sometimes with a slightly raised smooth median line; front densely and minutely punctulate; vertex somewhat coarsely punctate, especially around the eyes. Prothorax with a narrow smooth band along the middle, the disc external to this band finely and rather densely punctate. Elytra minutely and very densely punctulate on the dark parts, and there also faintly covered with dark tomentum; apex of each distinctly emarginate, with the outer angle more prominent than the sutural one. Body beneath almost bare of pubescence, a faint greyish pubescence only covers the sides of the hind breast. Metasternum and abdomen sparsely punctate; the femora more densely but somewhat unevenly punctured. Antennæ of male about equal in length to the body; those of the female not much shorter; first joint densely punctured.

Length 25–29 mm.

Hab. Assam.

215. **Pachyteria chrysogaster**, *Ritsema* (Callichroma), *Notes Leyd Mus.* x, p. 195 (1888); *id. idem.* xi, pl. 10, fig. 4 (1889).

Dark blue, sometimes almost black, tinged in places with green or violet; antennæ and legs ferruginous red; abdomen testaceous, with the front half of the first segment, and frequently a transverse band at the front border of each of the next three segments, blue or violet, and, like the meso- and metasternum, pronotum, scutellum and elytra, covered with short black pubescence; the whole of the underside covered with short golden coloured pubescence. Head almost entirely glabrous; densely punctate and somewhat rugulose in front, more coarsely punctured on the vertex; mandibles less elongate than is usual in the genus. Antennæ almost equal in length to the body in the ♂, shorter in the ♀; first joint sharply angulate but not dentate at the apex. Prothorax slightly longer than its width across the base, acutely tuberculate at the middle of each side, very densely punctulate and opaque above, with a smooth line, impressed in its anterior half, along the middle of the disc. Scutellum triangular, pubescent, with a smooth line along the middle. Elytra gradually narrowed backwards, but with the sides slightly sinuate instead of straight, separately rounded at the apex; the surface opaque owing to the dense puncturation and pubescence, except at the sutural edge and along one or two feebly raised lines on the disc of each. Body beneath almost impunctate. Front and middle femora rather strongly, and the hind femora more finely,

punctate; the latter extending to the apex of the elytra in the male. Fifth and sixth abdominal segments of the ♂ broadly emarginate at the apex. Intercoxal process of prosternum less strongly arched and not attaining to a level with the coxæ.

Length 19–26; *breadth* 5–7½ mm.

Hab. Ceylon.

Ritsema, while placing this species provisionally in *Callichroma*, considered that it ought perhaps to be made the type of a new genus. But I see no necessity for this, since the species, except for its slightly shorter mandibles and less strongly arched prosternum, possesses all the chief characters of *Pachyteria*.

Genus **CHLORIDOLUM.**

Chloridolum, *Thoms. Syst. Ceramb.* p. 174 (1864); *Lacord. Gen. Coléopt.* ix, p. 18 (1869).

Type, *C. bivittatum*, White.

Range. Oriental Region, extending to N. China and Japan, and through the Malay Archipelago to N. Australia.

Head raised between the antennæ so as to form an obtuse ridge, which is concave from side to side and sharply pointed at each end; mandibles moderately long, abruptly turned in at the end, furnished each with a tooth on the inner margin between the middle and the apex. Antennæ about twice as long as the body in the ♂, a little longer than the body in the ♀; first joint dentate anteriorly at the apex; third very little or not at all longer than the fourth, subequal to or slightly shorter than the fifth; eleventh in the ♂ much longer than the tenth, subequal to it in the ♀. Prothorax with an acute conical tubercle or spine at the middle of each side. Elytra long, more or less tapering posteriorly, narrowly rounded at the apex. Hind legs much longer than the middle or front legs; their femora more gradually thickened, and extended some distance beyond the apex of the elytra. First joint of the hind tarsus almost as long as the remaining joints united. Intercoxal process of prosternum strongly arched, reaching in the middle almost to a level with the coxæ; dilated at the hind end, but without reaching to the epimera.

216. **Chloridolum bivittatum,** *White* (Callichroma), *Cat. Coleopt. B. M., Longic.* p. 162 (1853).

Metallic green or blue; the legs and antennæ violaceous blue; prothorax with a densely and finely punctulate area faintly covered with black pubescence on each side of the middle of the disc; elytra each with a broad band along the middle of the disc densely covered with short black tomentum; the side densely punctulate, a little less finely in front and very finely posteriorly; the narrow band between the suture and the black medio-dorsal band rugulose,

glabrous and subnitid. Head punctulate densely above and very sparsely or not at all in front. Antennæ about twice as long as the body in the ♂, one-fourth longer than the body in the ♀; first joint strongly but rather sparsely punctured, subsulcate along its front face, and produced in a sharp angle or tooth at the apex. Prothorax with a strong sharp tubercle at the middle of each side, and an obtuse transversely elongated tubercle near the front margin; the upperside transversely striated except over the middle of the disc; the disc slightly raised, and tuberculate on each side, just in front of the basal constriction. Scutellum smooth near the base and impressed with a median groove; more or less rugulose posteriorly. Body beneath green; the hind breast sparsely pubescent; the abdomen glabrous, very glossy and with a slightly brassy tint. Hind femora of the ♂ extending well beyond the apex of the elytra; first joint of the hind tarsi about equal in length to the remaining joints united.

Length 25–38; *breadth* $6\frac{1}{2}$–$9\frac{1}{2}$ mm.

Hab. Bhutan; Assam; Manipur.

217. **Chloridolum trogoninum**, *Pascoe* (Callichroma), *Trans. Ent. Soc.* (2) v, p. 24 (1859).

Metallic green, with the legs and antennæ very dark blue, the latter covered except near the base with a faint black pubescence; prothorax with two patches on the disc, and the elytra each with a broad sub-sutural band, covered with short black tomentum. Head punctured closely on top, rather sparsely in front, impressed with a median line that extends from the clypeus to the vertex. Antennæ of ♂ longer than twice the body; first joint closely punctate; third barely longer than the fourth and not quite as long as the fifth. Prothorax transversely plicate and glossy, except on the disc between the anterior and posterior transverse groove; this central area has a dull granulated appearance, but bears sometimes a smooth glossy line or band along the middle. Scutellum smooth and shining. Elytra with a short sutural band behind the scutellum, and a band, somewhat brassy in colour, that begins at the shoulder and runs backwards along the middle of each elytron, distinctly and rather closely punctate, and glossy; the rest of the surface very finely granulated and dull. Body beneath, except the prothorax, faintly covered with a greyish pubescence which gives silvery reflections in certain lights. Femora closely punctulate, the hind pair very closely and more finely than the others; tarsi brownish black.

Length 18–31; *breadth* 5–8 mm.

Hab. Ceylon.

218. **Chloridolum alcmene**, *Thoms. Syst. Ceramb.* p. 568 (1865).

Metallic green; the legs and antennæ dark blue, passing into bluish-black or black towards the extremities; prothorax with a closely rugulose-punctured area, more or less covered with black

pubescence, on each side of the middle of the disc; the elytra with a rather faint covering of short black pubescence, except along each side of the suture for a short distance from the base, and sometimes also along a narrow dorso-lateral band that runs back from each shoulder. Head densely rugulose-punctate posteriorly, transversely striated at the sides, and sparsely punctate and subrugose on the front and between the antennæ. Prothorax with a sharp tubercle at the middle of each side, and a narrow, obtuse, transverse tubercle near the front margin; the upperside transversely striated in front and at the base, and also, but in somewhat curving lines, at the sides of the disc; longitudinally rugulose along the middle of the disc between the pubescent areas.

From *C. trigoninum*, Pasc., to which it is very closely allied, this species differs by the less distinct subglabrous band that extends along the outer part of the disc of each elytron; this band does not differ in colour from the colour of the rest of the elytra although, being less pubescent, it is somewhat glossier.

Length 20–36; *breadth* 4½–8 mm.

Hab. Assam; Andaman Is.; Burma: Karenee (*Fea*), Ruby Mines (*Doherty*).

219. **Chloridolum cinnyris,** *Pascoe, P. Z. S.* 1866, p. 518; *id. Trans. Ent. Soc.* (3) iii, p. 587 (1869).

Metallic green; the prothorax with a dull, granular, velvety patch on each side of the middle of the disc, and a much smaller similar patch near the front margin; the elytra with the sides and a very narrow sutural band dark blue, the intervening space forms on each a broad green band which is very closely rugulose-punctate and dull. Head finely and somewhat longitudinally striate on the upper part of the front, the lower part smooth and not distinctly marked off from the clypeus, the posterior part of the head closely and finely subrugulose-punctate. Antennæ bluish black, one-third longer than the body in the ♀ and more than twice as long as the body in the ♂. Prothorax somewhat rounded at the middle of each side, and armed there with a short sharp tubercle; narrowed and constricted near base and apex; the upperside more or less regularly striated in a transverse direction at the sides, across the base, and on the anterior part of the disc; longitudinally or somewhat irregularly striated along the middle between the two velvety patches. Body beneath green, with a faint covering of silver-grey pubescence. Prosternum of ♂ with a closely and finely punctured subopaque area that crosses it in front of the coxæ. Hind femora of ♂ extend by about one-third of their length past the apex of the elytra. First joint of hind tarsi nearly one-third longer than the remaining joints united.

Length 11–16; *breadth* 2–3 mm.

Hab. Burma; Penang; Java; Borneo.

220. **Chloridolum nympha**, *White* (Callichroma), *Cat. Coleopt. B. M., Longic.* p. 161 (1853).

Metallic green, with the femora purplish red, the tibiæ steel-blue, the tarsi bluish black, the antennæ steel-blue, the breast and abdomen brassy green with a faint covering of golden-yellow pubescence. Head nitid, sparsely and finely punctate on the front, transversely striated at the sides and rugulose-punctate on the crown. Antennæ of ♂ twice as long as the body; first joint strongly and rather closely punctured, marked with a groove along the front face and produced in a sharp angle or spine at the apex; fourth joint shorter than the fifth, about equal in length to the second and third united. Prothorax with a strong conical tubercle at the middle of each side, and a short obtuse tubercle near to the front margin; transversely and rather strongly striated and nitid all over the upperside, furnished with two feeble tubercles just behind the anterior transverse groove, and two more distinct and more widely separated, in front of the posterior groove. Scutellum glabrous. Elytra very closely punctured and dull, with a finely shagreened appearance. Femora of the hind legs extend well beyond the apex of the elytra; first joint of hind tarsus longer than the remaining joints united.

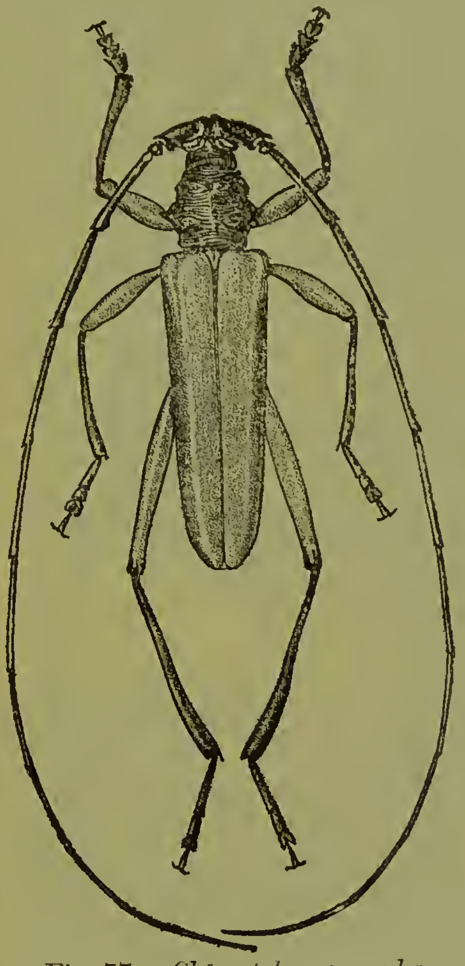


Fig. 77.—*Chloridolum nympha*, White, ♂. × $\frac{6}{5}$.

Length 30–39; *breadth* $6\frac{3}{4}$–9 mm.

Hab. Sikhim: Darjeeling, Mungphu; Manipur (*Doherty*).

221. **Chloridolum perlætum**, *White* (Callichroma), *Cat. Coleopt. B. M., Longic.* p. 161 (1853).

Metallic green, the head and prothorax glossy, the elytra dull; antennæ dark blue or violaceous; femora red, with the tips of the two anterior pairs and the distal third or so of the hind pair dark blue or violaceous like the tibiæ; body beneath glossy green, with a faint covering of grey pubescence which gives silvery reflections in certain lights. Head minutely and rather sparsely punctured

in front, densely above; impressed with a median line along the front: transversely striate at the sides behind the eyes. Antennæ less than twice the length of the body in the ♂; first joint densely punctulate, marked with a narrow longitudinal groove in front; third joint in its distal half and the succeeding joints along their whole length sulcate in front. Prothorax longer than broad, evenly convex above and transversely striated over its whole upper surface; the striæ slightly sinuous in parts, those which lie on the anterior half of the disc interrupted at the middle, the others continued right across. Elytra finely and very densely punctulate, faintly covered with very short dark pubescence. Femora densely and very finely punctulate. Tarsi blackish brown; first joint of hind tarsus as long as the remaining joints united.

Length 21–25 mm.

Hab. Assam; Tenasserim.

Genus NOTHOPEUS.

Colobus, *Serville* (*nec Illig.*), *Ann. Soc. Ent. Fr.* ii, p. 554 (1833).
Nothopeus, *Pascoe, Journ. Entom.* ii, p. 287 (1864).
Coloborhombus, *Thoms. Syst. Ceramb.* p. 486 (1865).

Type, *N. hemipterus*, Oliv.

Range. Oriental Region.

Head raised between the antennæ so as to form a short ridge concave from side to side and impressed with a line along the middle; front not clearly marked off from the clypeus; the latter prolonged anteriorly beyond the base of the mandibles, slightly membranous at its front edge; genæ moderately long. Antennæ nearly as long as the body in the ♂, much shorter in the ♀; first joint sharply angulate in front at the apex; third joint the longest, fourth to tenth gradually shorter, each angulate or subdentate in front at the apex; eleventh a little longer than the tenth. Prothorax transverse, tuberculate at each side, narrowed posteriorly the tubercles, constricted and transversely depressed at the base, marked above with a transverse groove near the apex. Elytra approximate at the suture for not more than half their length, dehiscent and narrowed posteriorly; as a rule very short, not extended beyond the middle of the first abdominal segment, but in one species they reach to the apex of the abdomen, in this species each elytron is rounded at the apex, in others each is more or less acutely pointed at the apex. Front and middle legs of moderate length; the hind legs long, with the tibiæ compressed (in one species subcylindrical), widest in the middle and narrowed towards each end. First joint of hind tarsus nearly or quite as long as the remaining joints united. Intercoxal process of prosternum rather narrow in the middle, and not strongly arched.

222. **Nothopeus hemipterus**, *Oliv.* (Cerambyx) *Entom.* iv, no. 67, p. 127, pl. 23, fig. 181 (1795); *Fab.* (Stenocorus) *Syst. Eleuth.* ii, p. 310 (1801); *Serv.* (Colobus) *Ann. Soc. Ent. Fr.* ii, p. 555 (1833).

Black, more or less tinged with violaceous or dark blue; vertex of head, prothorax and elytra covered with black tomentum, which is denser and somewhat velvety in appearance on the pronotum; wings somewhat variable in colour, in some specimens dark brown passing into dull tawny towards the edges, in others entirely violaceous blue; body beneath rather faintly covered with pubescence which for the most part is blackish, but on the sides of the posterior half of the first abdominal segment has a silvery grey lustre. Antennæ about equal in length to the body in the ♂, reaching but little past the apices of the elytra in the ♀. Prothorax armed with a small conical tubercle just before the middle of each side, narrowed posteriorly the lateral tubercles, constricted and transversely depressed at the base; the disc a little protuberant on each side just in front of the basal depression. Elytra extended a little beyond the hind coxæ in the ♀, and not beyond them in the ♂, approximate at the suture for less than half their length, then strongly dehiscent, each in its posterior half so as to form a triangle with its inner side strongly oblique and its outer side nearly straight, the apex acute in the ♀, slightly obtuse in the ♂. Hind tibiæ strongly compressed, widest about the middle, narrowed slightly towards the apex and more strongly towards the base; first joint of the hind tarsus as long as the remaining joints united.

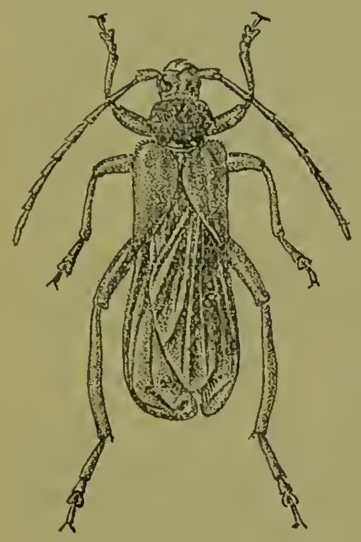


Fig. 78.—*Nothopeus hemipterus*, Oliv., ♀.

Length 22–30; *breadth* 5–8 mm.

Hab. Northern India; Burma; Java.

223. **Nothopeus fulvus**, *Bates* (Colobus), *Cist. Entom.* ii, p. 395 (1879).

Head, prothorax, elytra, wings, antennæ and legs fulvous; vertex of head, prothorax and elytra covered with dense golden pubescence; body beneath dark brown more or less strongly tinged with steel-blue to a variable extent, this dark colour limited in some specimens to the anterior half of each of the abdominal segments, while in others it extends to almost the whole of the ventral surface of the body and to the dorsal surface of the abdomen, as well; the hind femora also sometimes touched with dark blue near the base. Head glabrous and more or less punctate

in front. Antennæ almost as long as the body in the ♂, much shorter in the ♀; first joint acutely angular in front at the apex, third to tenth dentate at the apex. Disc of prothorax protuberant on each side just in front of the basal depression, and subsulcate along the middle near the base. Elytra extending a little beyond the hind coxæ in the ♀, and not beyond them in the ♂; approximate at the suture for nearly half their length, and then strongly dehiscent, the posterior half of each formed into a triangle more sharply pointed at the apex in the male than in the female. Body beneath faintly covered with silky pubescence which has for the most part a golden tint, but on the sides of the posterior border of the first abdominal segment in the male shows a silvery lustre. Legs thinly pubescent; the hind femora slightly compressed; the first joint of the hind tarsi almost as long as the remaining joints united.*

Length 32–35; *breadth* $8\frac{1}{2}$ mm.

Hab. Sikhim: Mungphu (*Atkinson*); Assam: Sylhet, Khasi Hills.

224. **Nothopeus tibialis**, *Ritsema* (Aphrodisium), *Notes Leyd. Mus.* xvi, p. 159 (1895).

Of a pale fulvous-brown colour, with the tips of the mandibles, the apical four joints of the antennæ, the anterior and posterior margins of the prothorax, the margins of the scutellum and of the metasternum, and the base of the ventral segments of the abdomen black; covered with short pubescence which on the pronotum, scutellum and elytra is somewhat velvety in appearance. Antennæ reach to the middle of the elytra in the ♀, and to a little beyond the base of their posterior third in the ♂. Prothorax strongly tuberculate on each side; disc with two obsolete tubercles in front, two posteriorly, and a slight median carina on the posterior half; anterior margin somewhat rounded in the middle. Elytra extending a little beyond the apex of the abdomen, dehiscing slightly from about the middle of their length, gradually narrowed posteriorly, each rounded at the apex and furnished above with two feeble costæ. Hind femora do not quite reach to the apex of the abdomen; hind tibiæ subcylindrical, thickest near the middle, narrowed towards base and apex and very slightly constricted a little before the apex. Fifth ventral segment of

---

* Nothopeus cingalensis, *White* (Colobus), *Cat. Coleopt. B. M., Longic.* p. 176 (1855).

"*C.* elytris pedibusque ferrugineis velutinis, abdomine atro, violaceo-micante, alis pallide ferrugineis apice subumbratis.

"*Hab.* Ceylon. From Dr. Hooker's collection.

"There is only a fragment of this distinct species in the Museum collection."

This fragment belongs to a male specimen, but is insufficient to enable the species to be identified with certainty. It is probably the same as *N. fulvus*, Bates. I doubt whether the locality given is correct.

the ♂ feebly sinuate at the apex, the sixth deeply emarginate at the apex, impressed with a line along the middle.

Length 29–35; *breadth* 8–8½ mm.

Hab. Assam: Khasi Hills.

Genus APHRODISIUM.

Aphrodisium, *Thoms. Syst. Ceramb.* p. 173 (1864); *Lacord. Gen. Coléopt.* ix, p. 11 (1869).

Type, *A. cantori*, Hope.

Range. Oriental Region and North China.

Head rather strongly raised and concave from side to side between the antennæ, impressed with a median groove; front large, depressed anteriorly; epistome membranous, distinct; labrum short and transverse; genæ rather short in front but prolonged downwards posteriorly; mandibles moderately long, obliquely inclined towards one another from the base to the middle and then gradually incurved. Antennæ about equal in length to the body in the ♂, shorter in the ♀; first joint acutely angulate or dentate in front at the apex; third longer than the fourth; fourth to seventh subequal, eighth to tenth gradually shorter; eleventh longer than the tenth in the ♂; the joints from the third of moderate thickness and more or less sharply angulate anteriorly at the apex. Prothorax with a transverse groove near the apex and another at the base; strongly tuberculate near the middle of each side and often tuberculate on the disc. Scutellum triangular. Elytra from two and a half to three times as long as they are broad, always extended some distance beyond the tip of the abdomen; gradually narrowed posteriorly, rounded or subacuminate at the apex. Legs long; the femora gradually thickened from the base to a little past the middle, the hind pair not reaching to the apex of the elytra. Intercoxal process of prosternum strongly arched, but not quite on a level with the coxæ, in the middle; slightly dilated posteriorly, almost or quite reaching to the epimera. Abdomen with six ventral segments visible in the ♂, and five in the ♀; fifth and sixth sinuately emarginate at the apex in the ♂; fifth rounded and entire at the apex in the ♀.

This genus is chiefly distinguished from *Pachyteria*, Serv., by its less robust antennæ and relatively much longer elytra. The head also is shorter and less narrow in front, and the mandibles shorter and more gradually curved towards the apex.

225. **Aphrodisium cantori**, *Hope* (Callichroma), *Trans. Linn. Soc.* xviii, p. 440, pl. 30, fig. 3 (1840).

Dark metallic green; glabrous and very glossy above; covered beneath with a fine silvery-grey pubescence; antennæ dark blue or violet, the first joint glabrous and densely punctulate, the next five or six subnitid, the last four or five dull black; legs dark blue or green, with the tarsi fulvous yellow. Head rather densely

punctate above, especially near the thoracic margin; slightly rugulose at the sides, almost impunctate in front; impressed with a median line on the front and inter-antennary ridge. Prothorax feebly and very sparsely punctulate, slightly rounded in the middle of the front margin; the anterior transverse groove strongly marked; the disc somewhat raised, rather flat in the middle, with two obtuse tubercles in front and two sharper and more widely separated tubercles behind; each side with an obtuse transversely elongated tubercle just behind the anterior transverse groove, in addition to the strong conical tubercle at the middle. Elytra feebly and sparsely punctulate near the base and apex; more densely along the intermediate area, where also they are often finely rugulose or coriaceous; each rounded at the apex. Metasternum distinctly but very sparsely punctured. Femora densely punctate. First joint of hind tarsus slightly compressed laterally, longer than the next two united. Fifth abdominal segment of the male with a deep sinuate emargination at the apex; the sixth with a feebler sinuate emargination. Antennæ as long as the body in the male, and about one-fifth shorter in the female.

Length 35–50; *breadth* 8–13 mm.

Hab. Assam.

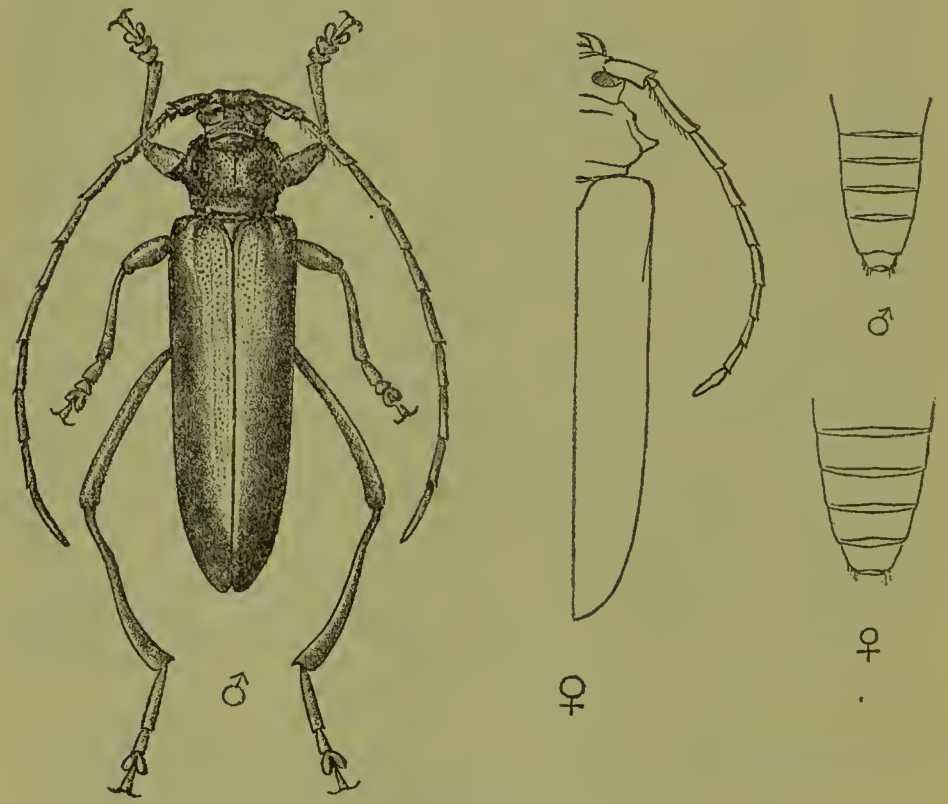


Fig. 79.—*Aphrodisium planicolle*, v. de Poll. × ⅚.

226. **Aphrodisium planicolle**, *van de Poll, Notes Leyd. Mus.* xii, p. 155 (1890).

Agrees entirely in coloration with *A. cantori*, Hope, which it

also resembles in size and in many points of structure, but differs as follows:—Head distinctly punctate and sometimes slightly rugulose in front. First joint of antennæ somewhat acutely angulate, but not dentate, at the apex. Prothorax without an anterior tubercle on each side; the disc raised, and slightly flattened in the middle but not to the same extent as in *A. cantori*, closely punctured especially towards the sides; the part adjoining the posterior groove obtusely rounded off, not raised so as to form a sharp tubercle or ridge on each side, and the anterior part more feebly tuberculate than in *A. cantori*. Elytra narrowed each to a rather sharp point at the apex; the surface finely rugulose or coriaceous, the sculpture somewhat coarser near the base and gradually finer towards the apex.

Length 40–50; *breadth* 9½–12 mm.

Hab. Darjeeling.

From *A. cribricolle*, van de Poll, with which this species agrees closely in structure, it is readily distinguished by the dark blue or green colour of the femora.

227. **Aphrodisium cribricolle,** *van de Poll, Notes Leyd. Mus.* xii, p. 157 (1890).

Metallic green or blue, glabrous and glossy above, covered beneath with a rather faint silvery grey pubescence; femora purplish red, the hind pair tipped with green or blue at the apex; tarsi fulvous yellow. Head punctate and somewhat rugulose in front. Antennæ extended a little past the apex of the elytra in the ♂, and not far beyond the middle of the elytra in the ♀; first four or five joints blue or green and subnitid, the rest dull black; the first joint acutely angulate, or sub-dentate, in front at the apex. Prothorax with a deep anterior and less strongly-marked posterior groove; the disc somewhat raised between the grooves, slightly convex, with a gradual slope to the anterior and a short abrupt slope to the posterior groove, strongly and closely punctured especially towards the sides, with the interstices generally slightly raised; a faint median groove on the anterior part. Elytra nearly three times as long as their width across the base, with coriaceous surface sculpture somewhat coarser near the base and gradually finer posteriorly; each narrowed to a point at the apex. Metasternum with some sparsely scattered setigerous punctures. Abdomen frequently testaceous on the anterior part of each of the three intermediate segments; fifth segment in the male with a feeble sinuate emargination at the apex, the sixth with a narrower and deeper emargination. Femora rather densely punctate, the hind pair most so. Intercoxal process of the prosternum rather narrow in the middle, and gradually dilated posteriorly without, however, reaching to the epimera.

Length 35–47; *breadth* 8–12 mm.

Hab. Sikhim.

228. **Aphrodisium hardwickianum,** *White* (Callichroma), *Cat. Coleopt. B. M., Longic.* p. 162 (1853).

Metallic green, glabrous and glossy above with a slightly brassy tint; covered faintly beneath with silver-grey pubescence; femora red or purplish-red; tarsi fulvous yellow; antennæ with the first four or five joints green and subnitid, the rest dull black. Head almost impunctate in front, and the prothorax sparsely and not strongly punctured above; the species in both these respects differs from *A. cribricolle*, van de Poll, with which in other points of structure, as well as in colour, it agrees very closely. Both may be distinguished from *A. cantori*, Hope, by the absence of an anterior tubercle from each side of the prothorax, by the postero-lateral part of the disc which is sharply ridged or tuberculated, and by the acuminate apices to the elytra; the males are further distinguished by the rather feeble, sinuate emargination at the apex of the fifth abdominal segment.

Length 30 mm.

Hab. Nepal.

229. **Aphrodisium neoxenum,** *White* (Callichroma), *Cat. Coleopt. B. M., Longic.* p. 154 (1853).

Callichroma ioscelis, *Hope* (without description), *Trans. Linn. Soc.* xviii, p. 440 (1841).

Head, prothorax and scutellum dark green and very glossy; elytra green with a slight bronzy tint, subnitid near the base, and somewhat dull posteriorly; first four or five joints of the antennæ blue or green and subnitid, the rest dull black; femora purplish red, the hind pair tipped with blue or green at the apex; tarsi of the same blue or green colour as the tibiæ; body beneath brassy-green veiled with grey pubescence. Head feebly and very sparsely punctate, marked with a few transverse striæ on each side behind the eyes. Prothorax with the front margin nearly straight, the anterior groove well-marked, but not extended far down on the sides; the disc slightly flattened in the middle and there also rugulose and rather densely punctate, raised posteriorly so as to form an oblique ridge or tubercle on each side, and with also a feebler oblique ridge on each side anteriorly; the lateral tubercle on each side placed slightly before the middle and not so strong as in the other species. Elytra rather more than three times as long as their width across the base, the whole surface with a rugulose or coriaceous sculpture, coarser near the base and gradually finer and closer towards the apex; each separately and rather sharply rounded at the apex.

Length 34–42 mm.

Hab. Assam.

230. **Aphrodisium robustum**, *Bates* (Leontium), *Cist. Ent.* ii, p. 408 (1879).

Metallic green and somewhat nitid; the antennæ, two large spots on the disc of the prothorax, and the legs dark blue; body beneath brassy-green, with a faint covering of silvery-grey pubescence. Antennæ about equal in length to the body in the ♂, a little shorter in the ♀; first joint densely punctulate, acutely angulate but not dentate at the apex; third and fourth angulate, and the fifth to tenth produced in a spine, at the apex, on the anterior side. Prothorax constricted and transversely grooved near the base and apex; with an obtuse transverse tubercle on each side between the strong median tubercle and the front margin; the disc densely rugulose-punctate and rather opaque on each side of the middle, rugulose and nitid at the sides and along the middle, somewhat raised so as to form a rather sharp ridge on each side posteriorly. Elytra posteriorly gradually and slightly narrowed, rounded at the apex, densely, very finely rugulose-punctate, rugulose and nitid for about half their length along the suture, faintly pubescent and rather opaque along the inner half of the disc. Hind femora of the ♂ not reaching to the apex of the elytra; those of the ♀ scarcely extended past the fourth segment of the abdomen. First joint of the hind tarsi about equal in length to the third and fifth united. Sixth abdominal segment of the ♂ rounded and entire at the apex.

Length 26–29; *breadth* $6\frac{1}{2}$–$8\frac{1}{2}$ mm.

Hab. Sikhim: Darjeeling, Mungphu; N.W. India.

231. **Aphrodisium griffithi**, *Hope* (Callichroma), *Trans. Linn. Soc.* xviii, p. 440, pl. 30, fig. 2 (1841).

Pachyteria zonopteroides, *Fleut. Ann. Soc. Ent. Fr.* 1887, p. 66, pl. 4, fig. 6.

Head, disc of prothorax, antennæ, legs and underside reddish brown; prothorax blackish brown near the front and hind margins and along the lower part of each side, the whole surface dull; elytra violaceous black, closely covered with short dark brown tomentum, which gives them a somewhat velvety appearance; each marked with two fulvous bands that cross a little obliquely, one some distance before, the other at about an equal distance behind the middle, the anterior band not quite reaching to the suture and a little constricted in the middle, the other reaching to the suture as well as to the outer margin, both bands rather densely pubescent and dull. Head densely and finely punctulate, subnitid, slightly black above between the eyes and also in the transverse depression at the base of the front. Antennæ of the ♂ about four-fifths of the length of the body; first joint densely punctulate, strongly dentate in front at the apex. Prothorax densely rugulose-punctate and faintly pubescent; the disc somewhat raised, with

a bisinuate posterior edge, which is raised so as to form an oblique tubercle near each side. Elytra somewhat less than three times as long as their width across the base; rounded at the apex. Body beneath covered faintly with silky pubescence of a fulvous-brown colour. Prosternum densely punctulate on the anterior part in the ♂; intercoxal process rather narrow in the middle, dilated posteriorly so as to meet the epimera. Fifth abdominal segment of the ♂ deeply emarginate.

Length 45-47; *breadth* 12 mm.

Hab. Assam.

232. **Aphrodisium rubripennis,** *Hope* (Purpuricenus), *Trans. Linn. Soc.* xix, 2, p. 110, pl. 10, fig. 6 (1843).

Violaceous blue; densely covered on the vertex of the head and on the pronotum with short velvety black tomentum; elytra fulvous red, covered with very short pubescence of nearly the same colour, each marked with a more or less large violaceous-black spot in front of the middle; the spot irregular in form and variable in size, reaches, when at its maximum, almost to the outer margin and to the suture as well as extends posteriorly a little past the middle. Head glabrous, and rather densely punctulate in front. Antennæ extended by their last two joints past the apex of the elytra in the ♂, shorter than the body in the ♀; first joint glabrous above, minutely and densely punctulate, sharply angulate, but not dentate, at the apex; third joint at the apex and the succeeding joints entirely covered with short dull black pubescence. Disc of prothorax slightly depressed on each side across the middle, with a slight transverse ridge on each side in front, and a more strongly raised ridge on each side behind; it has a smooth line along the middle, impressed in its anterior half and slightly raised and widened behind. Elytra separately and somewhat obtusely rounded at the apex. Body beneath with a covering of fine silky pubescence, tawny brown in colour on the breast and silver-grey on the abdomen. Intercoxal process of prosternum very slightly dilated posteriorly, the acetabula in consequence rather widely open. Femora finely and not very densely punctate. Fifth and sixth abdominal segments of the ♂ rather deeply emarginate at the apex, the sixth more narrowly and deeply so.

Length 25-32; *breadth* $6\frac{1}{2}$–$8\frac{1}{2}$ mm.

Hab. Assam: Sylhet, Shillong; Manipur (*Doherty*).

Genus CHELIDONIUM.

Chelidonium, *Thomson, Syst. Ceramb.* p. 175 (1864).
Leontium, *Lacord.* (*nec Thomson*) *Gen. Coléopt.* ix, p. 19 (1869).

Type, *C. argentatum*, Dalm.
Range. India, China, and Burma.

Antennæ rather slender, filiform, about equal in length to the body in the ♀ and a little longer in the ♂; the joints from the fifth or seventh to the tenth angulate or dentate at the antero-distal angle, third longer than the fourth, eleventh a little longer than the tenth. Prothorax transverse, tuberculate at the middle of each side. Elytra slightly and gradually narrowed backwards from the base, separately rounded at the apex. Front and middle legs moderately long, their femora subclavate; hind legs much longer, their femora gradually thickened, reaching to or beyond the apex of the elytra in the ♂; first joint of hind tarsus longer at least than the second and third united.

The structural characters that distinguish this genus from *Polyzonus*, Casteln., are slight. They consist chiefly in the distinctly angulated or dentate joints of the antennæ and the somewhat longer hind femora. The species with a few exceptions are destitute of yellow markings on the elytra, whereas in *Polyzonus* nearly all the species are spotted or banded with yellow.

Lacordaire, labouring under an error in regard to the genus *Leontium* of Thomson, placed *Chelidonium* in the same genus, making it his section B. *Leontium*, Thoms., has as its type *L. viride*, Thoms., a species from Japan (since described by Bates as *Chloridolum tenue*), and is really very closely allied to, and scarcely distinct from, *Chloridolum*.

233. **Chelidonium argentatum**, *Dalm.* (Cerambyx) *Schönh. Syn. Ins., App.* p. 151 (1817).

Dark metallic green, and for the most part dull, above; the underside of a brighter, glossier green, covered with a fine silvery-grey pubescence; legs and antennæ dark blue or violaceous, sometimes partly green, the tarsi brownish black. Head densely rugulose-punctate with a smooth, transverse, slightly depressed space between the clypeus and front; the front with a median linear groove which extends to the vertex. Antennæ a little longer than the body in the ♂; first joint nitid, densely punctate, fifth to tenth each with a sharp oblique spine at the apex on the anterior side; third and fourth angulated at the apex. Prothorax with a conical but rather obtusely pointed tubercle on each side; densely punctate and somewhat rugulose above, with a more densely punctate and less rugulose opaque area along each side of the middle, the rest subnitid. Scutellum smooth and glossy. Elytra very densely and rather finely rugulose-punctate, and for the most part dull; rather narrowly rounded at the apex. Femora finely and densely punctate; the hind pair extending a little past the apex of the elytra in the ♂. First joint of hind tarsus nearly as long as the remaining joints united. Fifth abdominal segment of ♂ with a rather deep sinuate emargination posteriorly, the

sixth less deeply emarginate; fifth in the ♀ rounded and entire at the apex.

Length 20–22; *breadth* 4½–5 mm.

Hab. Southern India: Nilgiri Hills; Assam: Naga Hills (*Doherty*), Khasi Hills; Manipur (*Doherty*); China.

234. **Chelidonium cinctum**, *Guér.* (Callichroma) *Icon. Règne Anim., Ins.* p. 220 (1844).

Structurally and in colour very like *C. argentatum*, Dalm., but differs from that species as follows:—The elytra marked each between the base and the middle with a yellow band of irregular form, the band transverse on the inner half of the elytron and prolonged a little posteriorly near its outer side. Head impressed with a transverse line between the front and clypeus. Pronotum transversely rugulose or striate at the sides; with a median subnitid band which extends almost from base to apex, and is sparsely punctured posteriorly, nearly smooth in front; and, at each side of this band, a darker area which is finely and somewhat intricately rugulose. Scutellum nitid, with the edges slightly raised posteriorly. Elytra rugulose anteriorly near the suture, elsewhere very densely punctulate; the yellow bands clothed with yellowish or tawny pubescence, and with the parts bordering on them blackish in colour.

Length 21–26 mm.

Hab. Southern India: Nilgiri Hills.

235. **Chelidonium sinense**, *Hope* (Promeces), *Proc. Ent. Soc. Lond.* 1841, p. 63; *id. Trans. Ent. Soc.* iv, p. 17 (1845); *Gahan* (Leontium), *Ann. Mus. Civ. Genova,* xxxiv, p. 17 (1894).

Form and coloration of *C. argentatum* Dalm., a species with which it had been for a long time confounded, but from which it differs as follows:—Antennæ with joints seventh to tenth sharply angulate or dentate at the apex on the anterior side, not spined as in *argentatum*; last ventral segment of the ♀ with a distinct emargination at the apex. The head is rather finely punctate on the front, the clypeus more coarsely punctate and somewhat transversely rugulose, and there is no smooth space between the clypeus and front. The prothorax is distinctly rugulose and glossy at the sides and base and along the median line; the dark opaque area along each side of the middle line is generally well-marked and more distinct than it is in *argentatum*. The first joint of the hind tarsus is almost or quite as long as the remaining joints united. The elytra are obtusely rounded at the apex.

Length 20–27; *breadth* 4½–6 mm.

Hab. Sikhim: Mungphu (*Atkinson*); Manipur (*Doherty*); Burma: Karenee (*Fea*); China.

236. **Chelidonium gibbicolle,** *White* (Callichroma), *Cat. Coleopt. B. M., Longic.* p. 160 (1853).

Metallic green, the head and prothorax rather glossy, the elytra dull; body beneath with a fine covering of silvery-grey pubescence; legs dark blue; antennæ bluish-black, with the first joint subnitid, more or less tinged with green. Head rugulose-punctate, marked with a sinuous transverse line between the clypeus and front; the front with a median line that extends to the vertex. Antennæ about equal in length to the body in the ♀ and a little longer than it in the ♂; fifth to tenth joints sharply angulate, or dentate, at the apex on the anterior side. Prothorax striate over the whole of the upper surface, the striæ for the most part transverse, but curved on and around the two rather distinct tubercles which are placed wide apart on the hind part of the disc; front margin of the pronotum somewhat rounded in the middle. Scutellum nitid, triangular and concave. Elytra finely and very densely punctulate, for the most part dull; somewhat nitid alongside the suture and along the outer half of the disc; narrowly rounded at the apex. First joint of hind tarsi as long as the remaining joints united. Fifth abdominal segment truncate, the sixth emarginate, at the apex in the male; fifth obtusely rounded at the apex in the female.

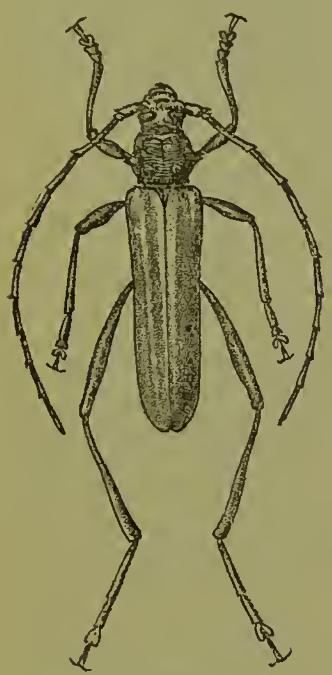


Fig. 80.—*Chelidonium gibbicolle*, White, ♂. × 7/6.

Length 22–28; *breadth* 5½–7 mm.

Hab. Assam: Sylhet; China.

Genus POLYZONUS.

Polyzonus, *Casteln. Hist. Nat. Coléopt.* ii, p. 438 (1840); *Lacord. Gen. Coléopt.* ix, p. 21 (1869).

Type, *P. fasciatus*, Fab., a species occurring in China and Siberia.

Range. Indo-Malayan Region, China and Siberia.

Head moderately raised and feebly concave from side to side, between the antennæ; the front subvertical, not distinctly marked off from the clypeus; mandibles rather long, obliquely inclined towards one another, slightly incurved at the apex. Antennæ only a little longer than the body in the ♂, and almost as long as it in the ♀; third joint much longer than the fourth; fifth to seventh subequal, eighth to tenth gradually shorter; eleventh scarcely

longer than the tenth in the ♂, obtuse at the apex: the joints very feebly or not at all angulate at the apex. Prothorax with a more or less distinct tubercle at the middle of each side. Elytra long, narrowed gradually and very slightly posteriorly, rounded at the apex; marked in most of the species with yellow spots or bands. Front and middle femora subclavate, gradually thickened from the base; the hind pair longer and less thickened, do not reach to the apex of the elytra in the ♂. First joint of the hind tarsi longer than the second and third united.

I. *Elytra marked with yellow spots or bands.*

A. *Prothorax distinctly tuberculate at the sides.*

237. **Polyzonus saigonensis**, *Bates, Cist. Ent.* ii, p. 413 (1879).

Dark metallic blue; the elytra with two very broad, transverse yellow bands placed, one a little before, the other just behind, the middle, the intervening space usually much narrower than either of the bands. Head very densely rugulose-punctate and very slightly nitid. Antennæ black, those of the ♂ slightly longer, and those of the ♀ slightly shorter, than the body; first joint stout, slightly curved, marked in front near the base with a broad shallow pit, the edges of which are slightly raised; joints sixth to tenth feebly angulate at the apex on the anterior side and scarcely broader than the fifth. Prothorax distinctly longer than its width across the middle; armed with a rather sharp conical tubercle at each side; more or less intricately rugulose above over its whole surface as well as at the sides; the disc gradually raised posteriorly, and the basal depression correspondingly abrupt and deep. Scutellum sulcate and smooth along the middle, very finely punctulate at the sides. Elytra narrowed gradually from the shoulders, obtusely rounded at the apex, finely and very densely punctulate, faintly covered with pubescence, for the most part opaque. Body beneath blue, covered with silvery-grey pubescence. Femora dark blue, densely punctulate; the hind pair reach nearly to the apex of the elytra in both sexes. First joint of the hind tarsus slightly longer than the next two united. Fifth abdominal segment of the ♂ sinuate at the apex, the sixth short, and more deeply sinuate at the apex; fifth segment of ♀ obtuse at the apex, with a very feeble emargination in the middle.

Length 18–20; *breadth* 4–5 mm.

Hab. Burma: Paungdé (*Corbett*); Cochin China: Saigon; Malay States: Patani.

238. **Polyzonus tetraspilotus**, *Hope* (Cerambyx), *Silberm. Rev. Ent.* iii, p. 71, pl. 32 (1835).
Polyzonus quadrimaculatus, *White, Cat. Coleopt. B. M., Longic.* p. 170 (1853).

Metallic green; the elytra each with two oblique yellow spots

or bands, which are bordered with violaceous black, and placed one at about one-fourth from the base, the other at one-third from the apex; the anterior spot directed obliquely forwards from near the suture to the side, the posterior spot obliquely backwards from near the suture to the outer margin. The antennæ extended past the apex of the elytra by the last joint or two in the ♂; sixth to tenth joints slightly angulated at the apex, and only very little broader than the preceding joints. Prothorax finely striated all over the upper surface and at the sides, except on and just around the short lateral tubercles; the striæ transverse, those on the middle and posterior part of the disc curved forwards just before they reach the middle line. Elytra finely and very densely rugulose-punctate; distinctly and rather strongly rugulose at the base around the scutellum and along the suture; the yellow bands covered with a very fine tawny pubescence. Body beneath covered with silvery-grey pubescence. Hind femora of the ♂ not reaching to the apex of the elytra. First joint of the hind tarsi a little longer than the second and third united. Fifth abdominal segment truncate, and the sixth sinuately emarginate at the apex, in the ♂.

Length 16–21; *breadth* $3\frac{1}{2}$–5 mm.

Hab. Madras? (*Walter Elliott*); Assam; Manipur (*Doherty*).

Var. **megaspilus**, nov.

In the sculpture of the prothorax and in coloration very like the type, but with the yellow spots of the elytra larger and less oblique; the anterior spot extends to the outer margin but not quite to the suture and has its borders more or less angulated; the posterior spot reaches from the outer margin to the suture, and thus forms a complete band across the elytron, its hind margin sinuate or oblique and its front margin angled on the middle of the disc. This variety attains to a larger size than the type, and seems to be limited in its range to the southern part of India.

Length 18–26; *breadth* 4–$6\frac{1}{4}$ mm.

Hab. Mysore; Malabar; Nilgiri Hills.

Var. **microspilus**, nov.

This variety differs from the type not only by the smaller size of the yellow spots on the elytra, but to some extent also in the sculpture of the prothorax. The anterior yellow spot is rounded or obliquely oval, and about equally distant from the suture and the outer margin; the posterior spot is oblique, and reaches almost or quite to the outer margin but not to the suture, its inner end rounded and slightly distant from the suture. The prothorax is regularly striate at the sides and near the front margin as in the type; but on the middle of the disc the striæ are more or less interrupted or broken, a somewhat irregularly

rugulose appearance replaces the regular radiating lines and curves seen in the type and in the var. *megaspilus*. The present variety was regarded by White as the *tetraspilotus* of Hope, and the true *tetraspilotus* he described as a distinct species under the name of *quadrimaculatus*. It does not differ in size from the typical form.

Hab. Assam: Sylhet, Cherra Punji, Khasi Hills.

Var. **macrospilus**, nov.

Resembles the type in form, colour and sculpture, but differs in that each of the four spots on the elytra is elongate-elliptical in form with its longer axis longitudinal, nearly equidistant from the suture and the outer margin, and the two posterior spots are more than twice as long as they are broad.

Hab. Burma: Ruby Mines (*Doherty*).

239. **Polyzonus flavocinctus**, *Gahan, Ann. Mus. Civ. Genov.* xxxiv, p. 17 (1894).

Metallic green; the elytra with two rather narrow, transverse, yellow bands placed at about one-fourth from the base and the other about one-third from the apex, the parts of the elytra that border on the bands violaceous black. In structural characters, and in the sculpture of the head, prothorax and elytra, it agrees closely with *P. tetraspilotus*, Hope, of which it may perhaps be only an extreme variety in which the spots are replaced by complete bands; these bands are, however, directly transverse rather than oblique. From *P. bizonatus*, White, which it resembles more in the banding of the elytra, it may be readily distinguished by the regular radiating striæ on the disc of the prothorax, and the glossy rugose area at the base of the elytra that surrounds the scutellum and extends a short way back along the suture.

Length 21–22; *breadth* $4\frac{5}{6}$–5 mm.

Hab. Burma: Karenee (*Fea*); Tenasserim.

240. **Polyzonus bizonatus**, *White, Cat. Coleopt. B. M., Longic.* p. 171 (1853).

Metallic green; with the antennæ (the first joint of which is green, excepted), the tibiæ and tarsi black; elytra with two transverse yellow bands—one, somewhat narrower, placed a little before the middle, the other, broader, behind the middle; the bands sometimes united by a narrow strip at the lateral margins. Head densely rugulose-punctate and nitid, sometimes with a brassy tint. Antennæ slightly thickened between the middle and the apex, a little shorter than the body in the ♀, as long as the body in the ♂; first joint densely rugulose-punctate; seventh to tenth slightly angulate anteriorly at the apex. Prothorax with

a distinct but rather blunt tubercle at the middle of each side; closely and irregularly rugulose on the disc, which is more or less dull, striate towards the sides, the striæ transverse and oblique; nitid at the sides and near the front and hind margins. Elytra covered faintly, except on the yellow bands, with a short black pubescence, which more or less obscures the green colour of the derm. Body beneath covered with a fine silvery-grey pubescence. Hind femora reaching nearly to the apex of the elytra in both sexes. First joint of the hind tarsi much longer than the second and third united. Last ventral segment of ♀ sinuate at the apex; fifth and sixth in ♂ sinuately emarginate at the apex.

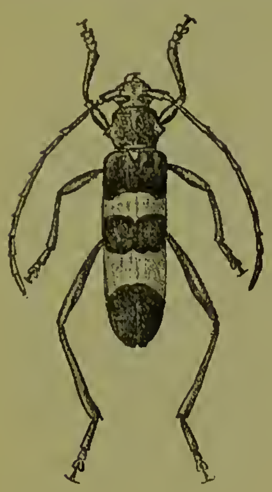


Fig. 81. *Polyzonus bizonatus*, White. × $\frac{7}{6}$.

Length 16–20; *breadth* $3\frac{1}{2}$–$4\frac{3}{4}$ mm.

Hab. Sikhim: Mungphu; Burma: Rangoon; Tenasserim: Moulmein; Siam.

241. **Polyzonus brevipes**, sp. n.

Metallic green; the elytra with two transverse yellow bands placed one a little before, the other behind the middle, the posterior band the broader of the two. Head nitid, densely rugulose-punctate. Antennæ shorter than the body in both sexes, slightly thickened between the middle and apex; first three or four joints green, the rest black; the first densely punctured; sixth or seventh to tenth slightly produced so as to form an acute angle at the apex on the anterior side. Prothorax with a smooth, glossy obtuse tubercle at the middle of each side; the disc densely rugulose-punctate, with a granulate appearance, sparsely covered with short black pubescence; the sides less densely punctate and somewhat smooth in places. Elytra finely and very densely punctulate; covered, except on the yellow bands, with a short dark pubescence which more or less obscures the colour of the derm. Body beneath covered with grey pubescence. Legs rather short for this genus; the hind femora reach very little past the hind margin of the posterior yellow elytral band; first joint of hind tarsi not much longer than the second and third united. Last ventral segment of ♀ obtusely rounded or subtruncate at the apex.

From *P. bizonatus*, which it much resembles in colour and sculpture, this species is distinguishable by the relatively shorter hind femora.

Length $17\frac{1}{2}$–19; *breadth* $3\frac{1}{2}$–4 mm.

Hab. Sikhim: Mungphu; Burma: Rangoon.

B. *Prothorax obsoletely tuberculate at the sides.*

242. **Polyzonus obtusus**, *Bates, Cist. Ent.* ii, p. 413 (1879).

Head and prothorax dark blue or bluish-black and slightly nitid; elytra violaceous black and dull, with two broad yellow bands across them—one a little before, the other behind the middle; legs and antennæ black; metathorax and abdomen, except on the last segment, covered with silvery-grey pubescence. Head very densely rugulose-punctate. Antennæ a little longer than the body in both sexes, not appreciably thickened towards the apex; first joint rather densely punctured, seventh to tenth slightly angulate at the apex on the anterior side. Prothorax of ♂ without lateral tubercles, but with the pleuræ bulged out at the sides from near the front margin to a little behind the middle; the pleuræ with the prosternum thus form a continuous strongly convex and very finely and densely punctulate area, sharply marked off at the sides from the pronotum; the latter closely striated; the striæ transverse near the front margin, which is slightly rounded in the middle, somewhat longitudinal, more or less wavy or broken on the middle of the disc, and oblique or longitudinal near the sides; prothorax of ♀ with a feeble, nearly obsolete, tubercle at the middle of each side; the pronotum striated as in the ♂, the pleuræ and prosternum transversely striated and not swollen. Elytra very closely and finely punctulate, very faintly pubescent; obtusely rounded at the apex. Hind femora reach nearly to the apex of the elytra in both sexes.

Length 15–24; *breadth* 3–3¾ mm.

Hab. Burma: Rangoon; Tenasserim; Cambodia (*Mouhot*); Saigon.

243. **Polyzonus watsoni**, sp. n.

♂. Metallic green; head, prothorax and scutellum nitid; elytra marked each with two rather large fulvous spots, one at somewhat less than one-third from the base, the other at about one-third from the apex; the anterior spot oval in shape, nearer to the suture than to the outer margin; the posterior spot more irregular in shape, extends as close to the outer margin as to the suture; the shoulders and a narrow sutural band nitid, the rest of the surface subnitid, in parts somewhat dull. Head densely rugulose-punctate above; the front finely and rather densely punctulate, marked with a median groove; the clypeus sparsely punctulate, transversely impressed below, marked off from the front by an arcuate groove. Antennæ reach only to the apical fourth of the elytra; bluish black, the first joint green, densely punctate; sixth to tenth acutely angulate or subdentate anteriorly at the apex. Prothorax swollen in the anterior half at

each side, with a very small obtuse tubercle at the middle; transversely, but somewhat irregularly, rugulose above, in part rugulose-punctate; the prosternum convex, very densely and rather finely rugulose-punctate. Scutellum rugulose. Elytra densely and very finely punctulate; the shoulders less densely punctulate, the sutural nitid band subrugulose. Body beneath, the prosternum excepted, covered with silvery-grey pubescence. Femora glabrous, nitid, very densely punctured; the hind pair reach nearly, but not quite, to the apex of the elytra. First joint of the hind tarsus distinctly longer than the next two joints united. Fifth abdominal segment arcuately emarginate at the apex, the sixth feebly emarginate, almost truncate, at the apex.

Length 26–27; *breadth* 7 mm.

Hab. Upper Burma: North Chin Hills (*Capt. Watson*).

II. *Elytra without yellow spots or bands.*

244. **Polyzonus prasinus**, *White* (Promeces), *Cat. Coleopt. B. M., Longic.* p. 170 (1853).
Chelidonium polyzonoides, *Thoms. Syst. Ceramb.* p. 568 (1865).

Dark metallic green or blue above and for the most part rather dull; underside bright green with a covering of fine silvery-grey pubescence; legs dark blue, subnitid; antennæ with the first joint green, subnitid, the intermediate joints violaceous and the last five or six dull black. Head densely rugulose-punctate above and on the front; the clypeus somewhat transversely rugulose. Antennæ about equal in length to the body in the ♂, slightly shorter in the ♀; with the joints successively thicker from the fifth or sixth to the eighth, and then to the eleventh successively narrower, the eighth joint somewhat thicker than the first; the joints very feebly or not at all angulated at the apex. Prothorax with a smooth, glossy, rather obtusely pointed tubercle on each side; the disc densely rugulose-punctate and more or less opaque in the middle, the sides and base somewhat transversely striated and subnitid. Scutellum smooth. Elytra obtusely rounded at the apex; finely and very densely rugulose-punctate and dull, the punctures a little stronger and less dense near the base. Hind femora extend to the apex of the abdomen in the ♂ but not quite to the apex of the elytra; in the ♀ they do not reach past the fourth segment. First joint of the hind tarsi shorter than the succeeding joints united. Fifth abdominal segment with a rather deep sinuate emargination, and the sixth subtruncate, at the apex in the ♂; fifth minutely truncate at the apex in the ♀.

Length 17–22 mm.

Hab. Southern India: Madras, Mysore, Nilgiri Hills; Assam; Rangoon.

245. **Polyzonus democraticus**, *Lameere, Soc. Ent. Belg.* 1890, *C. R.* p. ccxi.

"Obscurely chalybeous above, green beneath, clothed with ashy-grey pubescence; antennæ and legs nearly black; femora violaceous, the posterior pair cyaneous; elytra cribrately punctured, immaculate.

"Dull obscure blue, above rugosely punctured, beneath metallic green, slightly shining, covered with an ashy-grey pubescence. Antennæ black, the basal joints with a slight metallic sheen. Elytra slightly brighter at base and at apex; the latter more or less tinged with dark violet. Anterior and intermediate legs blackish, posterior pair obscurely blue, their femora terminally of a more beautiful blue.

"*Length* 18 mm.

"*Hab.* Kunbir."

Judging by the description this species must be very like *P. prasinus*, White, in colour, but whether or not closely allied to that species it is impossible to say, as the structural characters are very insufficiently described.

Genus ANUBIS.

Anubis, *Thomson, Syst. Ceramb.* p. 177 (1864); *Lacord. Gen. Coléopt.* ix, p. 25 (1869).

Type, *A. clavicornis*, Fab., a South-African species.

Range. South Africa; Eastern Asia from South China and Sikhim to the Malay Peninsula; and the Philippine Islands.

Head narrowed and more or less elongated below the eyes. Antennæ a little longer or shorter than the body, 11-jointed, gradually thickened from about the middle up to the apex; third joint longer than the fourth or following joints; eleventh slightly longer than the tenth, obtuse at the apex. Prothorax ovate-cylindrical, a little constricted at the base, unarmed at the sides. Elytra long, more or less parallel-sided, rounded at the apex. Legs not very long, the hind pair not much longer than the middle ones; femora gradually sub-clavate, the hind pair much shorter than the abdomen in both sexes; first joint of the hind tarsi longer than the second and third united.

The species of this genus have a considerable resemblance in form and colour to those of *Polyzonus*, but may be readily distinguished from them by the completely unarmed prothorax, shorter hind femora, and in most cases also by the form of the antennæ, the last two or three joints of which are gradually thicker than those that precede them.

246. **Anubis inermis**, *White* (Polyzonus), *Cat. Coleopt. B. M., Longic.* p. 171 (1853).

Chalybeate-blue; the elytra violaceous except near the base

nd apex, with two transverse yellow bands, placed one a little before, the other just behind the middle, the posterior band usually a little the broader of the two, and the intervening space about equal to it in breadth; antennæ with the first joint blue, the rest black; tibiæ and tarsi black; body beneath covered with silvery-grey pubescence. Head, prothorax and first antennal joint very densely rugulose-punctate; the head somewhat elongated below the eyes; the prothorax sometimes more or less violaceous on the middle of the disc. Scutellum finely and rather densely punctulate. Elytra finely and very densely punctate, the punctures a little larger and more distinct on the dark band next the base. Femora dark blue, or sometimes in great part black; densely punctate; the hind pair extend very little beyond the hind margin of the posterior yellow band of the elytra in both sexes. Fifth and sixth abdominal segments of the ♂ minute at the apex, the sixth half at least as long as the fifth and always distinctly visible; fifth segment of ♀ rounded at the apex.

Fig. 82.
Anubis inermis, White, ♂. × 1/1.

Length 14–19; *breadth* 3–4 mm.

Hab. Sikhim: Darjeeling, Mungphu; Burma: Bhamo, Teinzo, Karenee (*Fea*), Moulmein; Siam; Malay Peninsula; S. China.

247. **Anubis rostratus**, *Bates, Cist. Ent.* ii, p. 412 (1879).

Relatively a little narrower than *A. inermis*, White; of a somewhat brassy dark-blue colour; the elytra deeper blue, opaque in the middle, marked with two transverse fulvous-yellow bands; body beneath covered with silky pubescence which has a somewhat golden gloss. Head strongly elongated and narrowed between the eyes. Antennæ of ♂ do not exceed the body in length. Prothorax gradually narrowed in front, densely subrugosely punctured, with a short smooth line along the middle of the disc. Elytra obtusely rounded at the apex. Sixth abdominal segment of the ♂ very long, longer than the fourth and fifth united.

Length 19 mm.

Hab. Burma: Karenee (*Fea*); Cochin China: Saigon.

248. **Anubis bipustulatus**, *Thoms. Syst. Ceramb.* p. 569 (1865).

Metallic green or, more rarely, dark blue and nitid; legs and antennæ black; elytra marked each with a yellow spot placed towards the side at about one-third of its length from the apex, the spot bordered with violaceous; body beneath covered with silvery-grey pubescence. Head rather short below the eyes; densely rugulose-punctate. Antennæ scarcely thickened towards the apex. Prothorax rounded in the middle at each side, constricted at the base;

densely rugulose-punctate above, transversely rugulose near front margin, usually more or less smooth at the sides; prosternum of ♂ with a very finely and densely punctulate area that crosses it in front of the coxæ, this area rounded and very definitely limited at each side. Elytra finely and very densely punctulate; broadly rounded at the apex. Femora densely punctate, the hind pair much shorter than the abdomen. Sixth abdominal segment of the ♂ very short and sometimes almost invisible, its hind border almost transversely truncate and shortly fringed with hairs; the fifth segment slightly sinuate at the apex.

Variation. There is a good deal of variation in the size and shape of the postmedian spot of the elytra; one or two small yellow spots are sometimes present on the anterior part of each elytron.

Length 9–17; *breadth* $1\frac{3}{4}$–$3\frac{1}{2}$ mm.

Hab. Sikhim: Mungphu (*Atkinson*); Burma: Bhamo, Teinzo, Karenee (*Fea*), Rangoon; Siam; Malay Peninsula.

249. **Anubis fimbriatus**, *Bates, Cist. Ent.* ii, p. 412 (1879).

This species is very closely allied to *A. bipustulatus*, Thoms.; it agrees completely with it in structural character and in the sculpture of the various parts. The only difference observable is in the markings of the elytra, which take the form of two transverse yellow or fulvous bands, more or less interrupted at the suture; the posterior band occupies the same position on each elytron as the posterior spot in *bipustulatus*, and the anterior band replaces the one or two small spots sometimes seen in the latter species. The parts of the elytra bordering on the bands are dark violaceous in colour. The species has been found in the same localities as *bipustulatus*, and must be regarded as doubtfully distinct.

Length 13–19; *breadth* $2\frac{1}{2}$–$3\frac{1}{2}$ mm.

Hab. Sikhim: Mungphu (*Atkinson*); Burma: Karenee (*Fea*), Rangoon; Siam; Cochin China; Malay Peninsula.

Genus IPOTHALIA.

Ipothalia, *Pascoe, A. M. N. H.* (3) xix, p. 314 (1867); *Lacord. Gen. Coléopt.* ix, p. 27 (1869).

Type, *I. femorata*, Pasc., a species from the Philippine Islands.

Range. Pegu, Philippine Islands and Borneo.

♀. Head somewhat concave from side to side between the antennal supports; front subvertical, marked off from the clypeus by a single transverse or two oblique impressions; genæ rather short; mandibles of moderate length, obliquely inclined towards one another and slightly incurved at the end. Antennæ not extended past the middle of the elytra; third joint equal in length

to the fourth and fifth united, these subequal; sixth to tenth gradually shorter, compressed and dilated, produced each into a short angular process at the apex on the anterior side, eleventh scarcely longer than the tenth. Prothorax armed with an obtuse conical tubercle at the middle of each side. Elytra moderately long, more or less parallel-sided, rounded at the apex. Hind legs much longer than the middle pair, and these a little longer than the front legs; femora distinctly but not abruptly clavate, subpedunculate at the base, the hind pair reach almost to the apex of the elytra; hind tibiæ compressed, slightly dilated towards the apex; first joint of the hind tarsi a little longer, sometimes shorter, than the next two joints united. Abdomen narrowed posteriorly, rounded at the apex of the last ventral segment. Acetabula of front coxæ narrowly open posteriorly.

Pascoe, in describing this genus, stated that the unique type specimen of *I. femorata* appeared to him to be a male. In this he was mistaken. The type is undoubtedly a female, as is also the unique type specimen of *I. pyrrha*, Pasc. Lacordaire knew only the first of these two species, and appears to have shared Pascoe's mistake in regard to the sex, since the characters given by him for the male are really applicable to the female.

250. **Ipothalia pyrrha**, *Pascoe, A. M. N. H.* (3) xix, p. 314 (1867).

♀. Dark blue and subnitid; with the elytra somewhat greenish, very densely rugulose-punctate and dull, except near the apex where they are smoother, subnitid, and slightly bluish in colour; the legs entirely ferruginous red; the antennæ with the first two joints violaceous, the third to fifth and the sixth in part ferruginous, the rest bluish, more or less covered with dark brown pubescence; body beneath covered slightly with grey pubescence except on the forepart of the prosternum and on the last four abdominal segments, these four glabrous, nitid, and very sparsely punctulate. Head finely and rather sparsely punctulate in front, slightly rugulose above between the antennæ and the eyes, coarsely punctate just behind the eyes, rather strongly strigose at the sides and on the gular area beneath. Antennæ barely reach to the middle of the elytra; first joint rather densely punctulate, this and the third to fifth or sixth subglabrous, the rest more or less pubescent. Prothorax striated transversely near the front margin, and with a few transverse striæ also near the base; the disc transversely rugulose and punctate, with a narrow smooth band along the middle and a narrower transverse one in front. Elytra narrowed slightly from the base to the middle and slightly

Fig. 83.
Ipothalia pyrrha, Pasc.
× $\frac{6}{5}$.

widened again posteriorly, each obtusely rounded at the apex. Femora finely and very sparsely punctulate, the clavate portion almost impunctate in the middle. First joint of the hind tarsi slightly longer than the second and third united.

Length 16; *breadth* 4 mm.

Hab. Pegu.

Group *PYRESTINI.*

Antennal supports emarginate in front, more or less distinctly raised on the inner side; front subvertical; palpi rather short, subequal in length; eyes finely facetted, deeply emarginate, in one genus completely divided; gula with short mentigerous process. Antennæ more or less robust, usually shorter than the body in both sexes. Prothorax unarmed at the sides. Legs short; hind femora not reaching to the apex of the elytra; first joint of hind tarsi shorter than the second and third united. Front coxæ globular, their acetabula rounded on the outer side, closed posteriorly. Acetabula of middle coxæ open to the epimera. Metathorax without scent-pores. Wing-vein Cu 1 simple, Cu 2 absent.

The genera of this group are, with one exception, restricted in their distribution to the Oriental Region and North China. The species are characterised, to a greater or less extent, by their red coloration.

Synopsis of the Genera.

A. Eyes completely divided................ PACHYLOCERUS, p. 224.
B. Eyes emarginate.
  a. Lateral margins of elytra more or less deeply sinuate near base .... PYRESTES, p. 227.
  b. Lateral margins of elytra straight ...... ERYTHRUS, p. 229.

Genus PACHYLOCERUS.

Pachylocerus, *Hope, Trans. Ent. Soc.* i, p. 19 (1834); *Lacord. Gen. Coléopt.* viii, p. 519 (1869).

Type, *P. corallinus*, Hope.

Range. India, Ceylon, Burma, Sumatra and Java.

Head sulcate, narrowly concave between the antennal supports, the latter somewhat prominent, deeply emarginate in front; vertex marked with a median groove; clypeo-frontal sutures distinct; the clypeus slightly depressed in the middle, with a slightly raised area at its upper end; labrum short, broad; eyes completely divided, the two lobes of each rather widely separated. Antennæ short, thick; first joint stout, slightly thickened towards the apex, third, fourth and fifth subglobose or obconical, sixth to tenth compressed in front and acutely angulate at the apex, eleventh compressed, scarcely longer than the tenth. Prothorax strongly rugose, more or less rounded at the sides, narrowed in front, less so at the base. Elytra rather short, convex, rounded at apex,

marked with a short longitudinal groove below the shoulders. Legs rather short, stout; the femora subfusiform; the tarsi somewhat broad, with the first joint scarcely longer than the second. Intercoxal process of prosternum raised to a level with the coxæ, slightly projecting and truncate posteriorly.

251. **Pachylocerus corallinus**, *Hope, Trans. Ent. Soc.* i, p. 19, pl. 2, fig. 5 (1834).

Bright coralline-red, with two rather broad, longitudinal black bands on the pronotum and four on each elytron; the abdomen, the borders of the sterna, the apices of the femora, the second antennal joint and the bases of the next three or four, also of a blackish or dark brown colour. Head finely and rather densely punctulate. Antennæ not extended past the middle of the elytra in the ♂, shorter still in the ♀; third and fourth joints somewhat globular, the third broader and a trifle longer than the first or fourth: fifth obconic, narrower than the fourth; all these joints subnitid, minutely and rather densely punctured, the punctures with very short tawny setæ; sixth to tenth similarly punctulate and setose posteriorly, but covered densely with short tawny pubescence on the flattened part in front. Prothorax only slightly rounded at the sides; strongly wrinkled above, the ridges more or less regularly transverse; front and hind borders narrowly black. Elytra somewhat dull, covered with short pubescence; the dark brown bands, one of which runs along the suture and another at the outer margin, are somewhat broader than the intervening red bands, the two inner of which are feebly raised.

Length 25–33; *breadth* $6\frac{1}{2}$–$9\frac{1}{2}$ mm.

Hab. S. India: Nilgiri Hills; Bombay.

252. **Pachylocerus unicolor**, *Dohrn, Stett. ent. Zeit.* 1878, p. 359.

"Elongate, subcylindrical, red; the extreme apex of the mandibles, the knees, and the third, fourth and fifth joints of the antennæ at base black, second joint blackish, subnitid; head between the antennæ canaliculate, eyes completely divided; thorax transversely rugose; elytra costate, marked with a somewhat deep emargination behind the humeral angle.

"*Length* 21; *breadth* 5 mm.

"*Hab.* Burma." (*Dohrn.*)

Unknown to me.

253. **Pachylocerus sulcatus**, *Brongn. Nouv. Archiv. du Muséum* (3) iii, p. 240, pl. 10, fig. 4 (1891).

Pachylocerus pilosus, *Gahan* (*nec Guér.*), *Ann. Mus. Civ. Genova*, xxxiv, p. 12 (1894).

Head, prothorax, antennæ, body beneath and legs red or reddish brown; the second antennal joint and the third, fourth and

fifth at the base black; elytra dark brown, tomentose, marked each with five or six rather narrow, longitudinal bands of a reddish colour which is more or less obscured in fresh specimens by a covering of tawny or somewhat golden pubescence; these bands, with the exception of the one nearest the outer margin, are placed along slightly raised obtuse costæ; the first costa, placed close to the suture, is distinct only on the basal third of the elytron, it approaches more closely to the suture posteriorly and appears to be continued as a very feeble sutural elevation which is again more strongly raised near the apex; second and third costæ long, the third united posteriorly with the fifth, marked near the base with a few strong punctures. Antennæ slightly shorter than those of *P. corallinus*, Hope, but resemble them in the form of the joints. Prothorax a little angulate at the middle of each side, transversely wrinkled above, marked on the disc with two longitudinal, slightly curved, linear impressions which are less widely separated in front.

Length 19–28; *breadth* 5–8 mm.

Hab. Assam: Naga Hills (*Doherty*); Sylhet; Burma: N. Chin Hills (*Watson*); Karenee (*Fea*); Tenasserim: Thaungyin Valley (*Bingham*); South China and Siam.

254. **Pachylocerus crassicornis**, *Oliv.* (Cerambyx) *Entom.* iv, No. 67, p. 51, pl. 20, fig. 150 (1795).
Pachylocerus plumiferus, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 96, pl. 23, fig. 5 (1857).

Brownish-red or red in colour, with black spots on the prothorax and greyish-black spots and patches on the elytra; metathorax and abdomen entirely black, with a faint covering of grey pubescence; femora marked each with a black spot in front and another posteriorly. Antennæ with joints third to fifth strongly thickened towards the apex, these and the sixth tufted with short tawny or black hairs beneath near the apex. Prothorax very glossy, transversely rugose, marked above with five, and on each side with three or four black spots. Elytra faintly pubescent, for the most part rather dull; each with an elongate greyish-black spot near the shoulder, another at the suture near the base, and two small spots on the disc between; a rounded depressed velvety black spot on the disc a little before the middle, and a large greyish-black patch on the posterior half, this patch widened posteriorly, sometimes giving off a branch towards the suture, where it joins a short sutural band of the same colour; all these elytral spots and patches somewhat variable. The elytra in this species relatively shorter than in the others, not more than

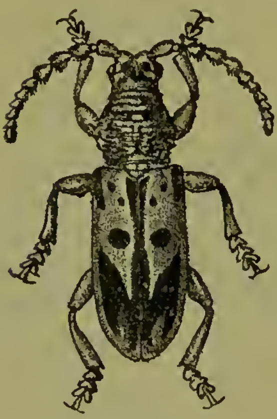


Fig. 84.
Pachylocerus crassicornis, Oliv. × 2/3.

twice as long as their width across the base, more broadly rounded at the apex.

Length 17–25; *breadth* 5–8 mm.

Hab. Ceylon; South India: Trivandrum; Calcutta; Chutia Nagpur.

Genus PYRESTES.

Pyrestes, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 96 (1857); *id. ibid.* (3) iii, p. 576 (1896).

Pyresthes, *Lacord. Gen. Coléopt.* viii, p. 520 (1869).

Type, *P. eximius*, Pasc., a species from Borneo.

Range. China and Oriental Region.

Head with the antennal supports deeply emarginate in front and rather narrow and acute on the inner side; the front short, subvertical; the clypeus and genæ moderately long; the eyes rather deeply emarginate; gula with a short mentigerous process. Antennæ equal in length to the body, or slightly longer, in the ♂; shorter than the body in the ♀; fifth to tenth joints compressed, dilated and strongly angulated at the apex on the anterior side; eleventh appendiculate, sometimes with a small projecting angle in front where the appendix begins. Prothorax ovate-cylindrical, longer than broad, transversely grooved close to the base. Scutellum triangular. Elytra parallel-sided or slightly widened posteriorly, somewhat convex above, rounded at the apex; the lateral margins more or less deeply sinuate near the base. Legs rather short, subequal in length; femora gradually clavate, the hind pair not reaching past the third segment of the abdomen; middle and hind femora in some species with a fine carina on each side close to the ventral face, in others without carinæ. First joint of the hind tarsi about equal in length to the second and third united; tarsal claws moderately long, not very widely divergent. First segment of abdomen much longer than the second. Wings with vein Cu 1 simple, Cu 2 absent; vein A 2 runs close to A 1 near the middle of its length, but is not united with it by means of a cross-vein.

255. **Pyrestes miniatus**, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 97 (1857).

"Red, pubescent; prothorax transversely very finely striate; elytra finely punctured; eyes and the abdomen black, the apical two segments red.

"Head, thorax and elytra red; antennæ, eyes, legs, posterior portion of the thorax beneath and abdomen black (except the last two segments, which are pale red); prothorax with very fine transverse striæ, with the elytra pubescent and covered with numerous minute punctures. In the collection of W. W. Saunders, Esq.

"*Length* $5\frac{1}{2}$ lines" = 12 mm.

"*Hab.* Northern India."

Unknown to me.

256. **Pyrestes pyrrhus**, sp. n.

♂. Prothorax, elytra and abdomen red, the last somewhat darker in colour at the base of the first segment; head, antennæ, legs, meso- and metathorax black. Head finely and very densely punctulate above, less densely and less finely punctate in front. Antennæ about as long as the body; first joint densely rugulose-punctulate; fifth to tenth compressed, moderately broad, angulated at the apex on the anterior side. Prothorax subnitid, slightly protuberant at the middle of each side, narrowed towards the apex and to a less extent towards the base, transversely and rather deeply striated over the upper surface, the striæ slightly irregular in places, with some small punctures scattered amongst them; the sides also striated, with the striæ more or less curved or oblique, and the punctures more densely placed. Elytra slightly nitid, very sparsely covered with short red pubescence, rather strongly and very thickly punctured; the punctures a little larger and more distinct near the base and gradually smaller towards the apex; the lateral margins rather strongly sinuate near the base. Meso- and metathorax densely and rather strongly punctured; the abdomen more finely punctate. Middle and hind femora feebly carinate on each side near the base, the clavate portions slightly angulate on the ventral side and fringed with short grey hairs: the hind femora do not extend past the second segment of the abdomen. Tibiæ slightly curved, the middle ones thickened beneath at the apex.

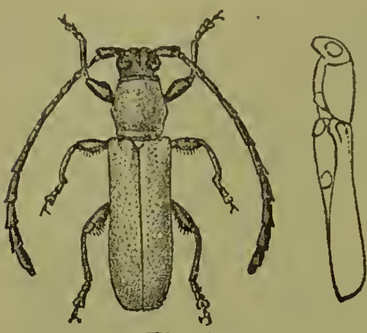


Fig. 85.
Pyrestes pyrrhus, Gahan, ♂. × $\frac{2}{1}$.

Length ♂ 13; *breadth* 3 mm.

Hab. Chutia Nagpur: Nowatoli (*R. P. Cardon*). Type in coll. R. Oberthür.

M. Oberthür has identified this species as the one which Prof. Lameere has recorded from Chutia Nagpur under the name of *Pyresthes hypomelas*, Fairm.

257. **Pyrestes birmanicus**, *Gahan* (Pyresthes), *Ann. Mus. Civ. Genova*, xxxiv, p. 16 (1894).

♂. Pronotum, the front margin excepted, and the elytra red: abdomen reddish, with the middle of the base black; rest of the underside, the head, antennæ, legs and scutellum black. Antennæ almost as long as the body, the third joint a little longer than the first or fourth. Prothorax rather strongly and somewhat abruptly constricted at the apex, its sides slightly rounded between the middle and the apical constriction and feebly sinuate between the middle and the base; crossed above by some feeble and not very

regular ridges and without any distinct puncturation; the surface dull. Elytra with the lateral emargination near the base not deep; the surface dull all over, closely and not very strongly punctured, the punctures somewhat evenly distributed, not much larger near the base than they are near the apex; apices rounded, briefly mucronate at the suture.

♀. Antennæ much shorter than the body; prothorax less abruptly constricted at the apex, closely, sub-rugosely punctured above; abdomen entirely of a dull reddish tint.

Length 13¾; *breadth* 3 mm.

Hab. Tenasserim: Thagata and Moulmein (*Fea*).

258. **Pyrestes dohertii**, sp. n.

Pronotum, except at the front margin, and elytra red; head, body beneath, legs, scutellum and antennæ black. Head finely and densely rugulose-punctate. Antennæ of ♂ slightly longer than the body; third joint slightly longer than the first and distinctly longer than the fourth; fifth subequal in length to the third, widened and strongly angulate at the apex in front; sixth to tenth also dilated and strongly angulated at the apex; eleventh a little longer than the tenth. Prothorax subnitid, subcylindrical, narrowed very slightly in front; transversely striated and rather sparsely punctured above and on the sides; very densely punctured below and around the outer borders of the acetabula. Elytra strongly and very closely punctured, especially near the base, where also they are slightly nitid; rounded and unarmed at the apex. Thorax densely and rather strongly punctured, the abdomen finely and less closely punctate. Legs subnitid, feebly and sparsely punctulate, and, like the underside of the body, very scantily furnished with short greyish pubescence. Femora not carinate, and not strongly thickened. First segment of abdomen as long as the second and third united, the last segment sinuate at the apex.

Length 9; *breadth* 2 mm.

Hab. Burma: Karen Mts. (*Doherty*).

Genus ERYTHRUS.

Erythrus, *White, Cat. Coleopt. B. M., Longic.* p. 142 (1853); *Lacord. Gen. Coléopt.* viii, p. 521 (1869).
Disidæma, *Thomson, Essai Classif. Ceramb.* p. 147 (1861).
Pseudoleptura, *Thomson, l. c.* p. 148.

Type, *E. championi*, White, a species from Hong-Kong.

Range. Oriental Region, China and Formosa.

Resembles *Pyrestes*, Pasc., in the shape and structure of the head and antennæ, but the antennæ are somewhat shorter, extending very little, or not at all, past the middle of the elytra in the ♀, and not far beyond it in the ♂; the sixth to the tenth joints sharply dentate at the apex on the anterior side, the eleventh

sharply pointed at the end. Prothorax widest as a rule just a little before the base, slightly constricted at the base, more or less gradually narrowed in front; its length about equal to its greatest breadth. Elytra gradually and slightly widened posteriorly, rounded at the apex in most of the species, sometimes slightly mucronate at the suture; attenuated and spined at the apex in some of the forms; the sutural edges slightly raised, especially near the apex; the lateral edges somewhat thickened and convex, formed into an obtuse ridge that extends almost the whole length of each elytron. Legs a little longer than in *Pyrestes*, with the femora less thickened, furnished always with a fine carina at the lower edge on each side. Last abdominal segment of ♀ short and broad, sinuately truncate at the apex; between this and the last tergite, the internal segment which forms a sheath to the ovipositor is usually visible; its dorsal plate is emarginate in the middle and densely fringed with long tawny hairs posteriorly. Last abdominal segment of ♂ narrowed gradually posteriorly, broadly rounded at the apex; the sixth or internal segment sometimes visible in the form of a thin flat plate that projects a little beyond the fifth.

259. **Erythrus bicolor**, *Westw.* (Saperda) *Cab. Orient. Ent.* p. 60, pl. 29, fig. 9 (1848).

Pronotum and elytra carmine-red, entirely opaque, the pronotum marked with two small, rounded, or slightly elongated black spots placed one on each side of the middle of the disc; head, antennæ, scutellum, legs and underside black. Head densely and finely punctulate, sparsely covered with greyish-tawny pubescence in front. Antennæ barely reach to the middle of the elytra in the ♀, with the joints from the third rather distinctly dilated, the fifth angulate, and the sixth to tenth dentate at the apex on the anterior side. Prothorax somewhat rugulose-punctate, widest just a little before the base, narrowed very slightly thence up to the middle, and more strongly from the middle to the apex; the two black spots placed on two feebly raised tubercles which are covered with velvety pubescence, the black colour, but not the pubescence, sometimes extended a little way behind the tubercles; the disc rather strongly convex between the spots, very feebly tuberculate on each side near the base. Scutellum transverse and very short. Elytra finely and not very densely punctulate, rounded at the apex, with a very short inconspicuous tooth at the suture; each elytron furnished above with a slightly raised, median, longitudinal costa that extends for about four-fifths of its length from the base, and another feebler costa that is placed midway between this one and the suture. Body beneath very densely punctulate, the punctures slightly larger on the metasternum than they are on the episterna and abdomen. Femora densely and very finely punctulate.

Length ♀ 17–19; *breadth* 4 mm.

Hab. Assam (*Jenkins*), type ♀ in Hope Museum, Oxford Darjiling; Brit. Bhutan (*in coll. Oberthür*).

I have seen no male specimen that can with certainty be referred to this species. The species is very closely allied to *E. fortunei*, White, from China and Hong Kong.

260. **Erythrus westwoodi,** *White, Cat. Coleopt. B. M., Longic.* p. 143 (1853).

Head to a greater or less extent, prothorax and elytra carmine-red and very nearly opaque; the prothorax with two black spots or a single continuous band on each side of the disc; antennæ, scutellum, legs and underside black. Head densely punctulate, with the occiput, anterior part of the clypeus and the mandibles usually black; sometimes very nearly black. Antennæ extend to the middle of the elytra in the ♀, and to a short distance beyond it in the ♂; third and fourth joints thickened at the apex, the fifth to tenth compressed and dilated. Prothorax rugulose-punctate, similar in form to that of *E. bicolor*, Westw., furnished on the disc with four tubercles—two near the middle and two near the base, the two median tubercles mamilliform, the basal less strongly raised; the black spots that cover the tubercles usually extend between them so as to form a band, sometimes prolonged in front, on each side; the disc evenly and rather feebly convex between the bands. Elytra a little more strongly punctured than those of *E. bicolor*; each elytron with only a single dorsal costa, which is, however, more prominent than the median costa in *E. bicolor*. Body beneath black, except the prosternum which, like the rest of the prothorax, is red; very densely punctulate, and scarcely less finely so on the metasternum than on the other parts.

Fig. 86. *Erythrus westwoodi*, White.

Length 17½–22; *breadth* 4–5 mm.

Hab. Himalayas; Northern India (*Buckley*); Almora; Manipur (*Doherty*).

261. **Erythrus coccineus,** sp. n.

Head, prothorax and elytra carmine-red, very nearly opaque; the prothorax with a small round velvety black spot on each side of the middle of the disc; antennæ, scutellum, legs, meso- and metathorax black; abdomen brown, more or less deeply tinged with dark red. Head densely punctulate. Antennæ about three-fourths the length of the body in the ♂, not extended beyond the middle of the elytra in the ♀; first joint densely punctulate; fifth joint angulate, and the sixth to tenth sharply dentate, at the

apex on the anterior side. Prothorax somewhat indistinctly rugulose-punctate; the disc with a postero-median tubercle, which has a very short, small, glossy carina on top; the black spots very slightly raised. Elytra finely and not very densely punctulate, rounded at the apex, sometimes slightly truncate or emarginate near the suture, armed with a short sutural tooth; each with a slightly raised, median, longitudinal costa. Body beneath finely and very densely punctulate, somewhat less finely and less densely on the metasternum than elsewhere. Femora minutely and densely punctulate.

Length 13½–17; *breadth* 3–4 mm.

Hab. Northern India: (?) Assam.

Group *PROTHEMINI.*

Antennal supports slightly raised, emarginate in front; genæ rather long: eyes finely facetted, emarginate. Prothorax unarmed, rounded at the sides. Elytra rather short and relatively broad, somewhat flattened above, the epipleures distinct from base to apex Legs long; hind femora extending past the apex of the elytra; hind tarsi long, the first joint laterally compressed, longer than the second and third united. Front coxæ globular, not prominent; their acetabula rounded on the outer side, closed posteriorly. Acetabula of middle coxæ extended to the epimera. Episterna of metathorax broad, more or less parallel-sided, truncate posteriorly. Abdomen convex, its first segment long, especially in the ♀. Wing-vein Cu 1 simple, Cu 2 absent.

Synopsis of Genera.

A. Lateral margins of elytra rounded near base, sinuate in middle .... HOMALOMELAS, p. 232.
B. Lateral margins of elytra nearly straight .. PROTHEMA, p. 235.

Genus **HOMALOMELAS.**

Homalomelas, *White, Cat. Coleopt. B. M., Longic.* p. 216 (1855); *Lacord. Gen. Coléopt.* viii, p. 525 (1869).

Type, *H. gracilipes*, Parry.

Range. Ceylon.

♀. Head feebly concave between the antennæ, grooved above; clypeus depressed; eyes finely facetted, emarginate, moderately large; cheeks moderately long; gula transversely wrinkled, produced in a short mentigerous process. Antennæ a little longer than the body, with the last seven joints compressed, the sixth to the tenth more or less angulate anteriorly at the apex; the fourth and fifth subequal, each much shorter than the third, and also shorter than any of the succeeding joints. Prothorax unarmed at the sides, subcylindrical, finely ridged or granulated above. Elytra somewhat flattened above, with the sides extended vertically

downwards only in the anterior fifth or so of their length, but provided with very distinct epipleures in all their length, the lateral margin somewhat rounded anteriorly, slightly sinuate near the middle, straighter posteriorly. Front and middle legs moderately long, with the femora subfusiform; hind legs much longer, with the femora more slender, gradually thickened towards the apex and extended beyond the apex of the elytra, all the femora carinate on each side near the lower border; first joint of hind tarsus laterally compressed, longer than the remaining joints united. Prosternum vertically deflexed posteriorly. Front coxæ rounded, with their acetabula closed posteriorly; acetabula of middle coxæ open to the epimera. Abdomen convex, the first ventral segment as long at least as the next two united.

I have not seen any males of this genus; and Lacordaire's description of it appears to me to have been based upon female specimens only, which he erroneously considered to be males. The male has probably the antennæ relatively longer than in the female, the first abdominal segment not so long in proportion to the other segments, and the sixth segment visible as in the males of the allied genus *Blemmya*, Pasc.

262. **Homalomelas gracilipes**, *Parry* (Cerambyx), *Trans. Ent. Soc.* v, p. 184, pl. 18, fig. 6 (1849).

Black; prothorax with three pubescent white spots at the base and one at the middle of each side; scutellum white; elytra marked each with two pubescent white spots placed obliquely at the middle, the outer spot farther back than the inner one, and with a transverse white spot or band a little before the apex. Head rather densely punctate, grooved above between the eyes. Antennæ of the ♀ extended by nearly the last joints past the apex of the elytra; first joint densely rugulose-punctate; fourth much shorter than the third and but little shorter than the fifth; sixth to tenth compressed, angulate anteriorly at the apex. Prothorax widest at base, a little longer than broad, covered above with fine transverse ridges, those on the anterior half more or less straight and those on the posterior half strongly sinuate. Elytra subnitid, except near the base where they are rather densely punctate and dull; each with an obtuse carina that runs obliquely backwards from the shoulder and ends on the inner part of the disc a little in front of the pre-apical white band, this carina densely and rather strongly

Fig. 87.
Homalomelas gracilipes, Parry, ♀. × $\frac{2}{1}$.

punctured, the side of the elytron external to it sparsely punctulate, and the space between it and the suture almost impunctate; apex of each elytron truncate, with a short tooth at the outer angle. Body beneath with a covering of greyish or greyish-white silky pubescence. First abdominal segment not longer in the ♀ than the next two united.

Length 14–15; *breadth* 4 mm.

Hab. Ceylon.

263. **Homalomelas quadridentatus**, sp. n.

Very like *H. gracilipes*, Parry, in colour and markings, but with an oblique white band, instead of two spots, at the middle of each elytron, a white line that extends along the suture from the pre-apical band to the apex, and the middle white spot at the base of the pronotum triangular in form and more distinct. Antennæ of ♀ extended by the last two joints past the apex of the elytra; the joints from the sixth to the tenth more strongly angulate than in *gracilipes*. Prothorax widest at the middle, scarcely longer than broad, finely wrinkled above, with the ridges all more or less contorted, none directly transverse. Elytra each with two short teeth at the apex; a dorsal costa feebler than in *gracilipes*, less densely punctate and not extending past the median band; the sutural area sparsely and finely punctate. Episterna of meso- and metathorax covered with white pubescence, the sterna less densely clothed with grey pubescence; first abdominal segment and narrow bands at the sides of the next three greyish white; first segment longer in the ♀ than the next three united.

Length $12\frac{1}{2}$; *breadth* $3\frac{3}{4}$ mm.

Hab. Ceylon.

264. **Homalomelas zonatus**, *Pascoe, Trans. Ent. Soc.* (2) v, p. 23 (1859).

Black, slightly tinged with bluish or violaceous; prothorax with a basal pubescent white band which curves downwards and forwards on each side; scutellum white: elytra marked each with an obliquely transverse white band at the middle and a transverse spot or band at the apex. Prothorax granulated above, not wrinkled, the granules more or less elongated transversely and of unequal size. Elytra glossy on posterior half, densely punctulate near the base, strongly but not very densely punctate along the feebly raised costa which runs obliquely backwards from the shoulder to the middle; each elytron truncate at the apex, with a feeble tooth at the outer angle. First two abdominal segments with a broad greyish-white band at the posterior border; first segment in the ♀ not longer than the next two united.

Length 13–15; *breadth* 4 mm.

Hab. Ceylon.

Genus PROTHEMA.

Prothema, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 43 (1855); *Lacord. Gen. Coléopt.* viii, p. 526 (1869).
Sigeum, *Pascoe, P. Z. S.* 1866, p. 523.

Type, *P. signata*, Pasc., a species from North China.
Range. Bhutan, Assam, North China, Malay Peninsula and Philippine Islands.

Closely allied to *Homalomelas*, White, from which it differs chiefly by the structure of the elytra. These have narrower and less distinct epipleures, and the sides extend downwards near the base only to a slightly greater extent than in the rest of their length, so that the lateral margins are but feebly sinuate and nearly straight. The prothorax is relatively shorter and broader than in *Homalomelas*, and is not wrinkled or granulated above. The one species included in the Indian fauna is in form, colour and markings somewhat suggestive of a Clytid.

265. Prothema aurata, sp. n.

♀. Black, densely covered above with silky pubescence of a somewhat golden yellow colour, and marked with some densely punctured glabrous black bands; the body beneath covered with pubescence, which is yellowish towards the sides, ashy-grey in the middle. Antennæ of the ♀ slightly longer than the body, with the proximal three or four joints black, the rest brown, all faintly covered with pale grey pubescence; joints sixth to tenth rather sharply angulated anteriorly at the apex. Prothorax not longer than broad, gradually narrowed anteriorly, slightly constricted at the base; the disc with two black bands that run forward from the base and slightly converge anteriorly, but do not reach quite to the front margin; the sides each with one black band that extends from the base to a little beyond the middle. Elytra with the sutural and lateral margins black, marked each with a black band that runs backwards from the shoulder and ends in a transverse black bar placed just behind the middle, and a black band or spot that extends obliquely from the middle of the disc to the outer margin and is placed about midway between the apex and the submedian transverse bar; apex of each elytron truncate, with a small tooth at the outer angle. Legs black, faintly clothed with ashy-grey pubescence, the tarsi more or less brown.

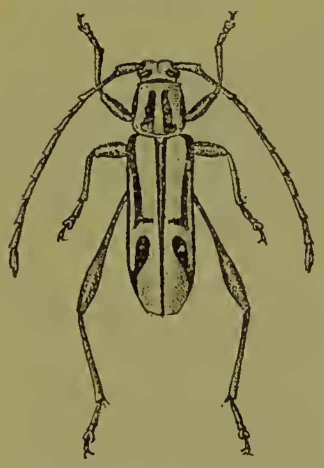


Fig. 88.
Prothema aurata, Gahan. × 4/1.

Length 12; *breadth* 3 mm.
Hab. Assam: Patkai Mts. (*Doherty*).

Group *THRANIINI.*

Head rather strongly sloped above; the front vertical, flat, large and rectangular; eyes finely facetted, feebly emarginate, the upper lobe very short; gula without mentigerous process. Antennæ cylindrical, shorter than the body in both sexes. Prothorax parallel-sided, the disc more or less raised in front. Elytra long, deflexed at the sides only where they cover the thorax, flat, narrow and more or less dehiscent posteriorly, acuminate at the apex. Femora clavate, the hind pair much shorter than the abdomen. Front coxæ rather prominent, contiguous, their acetabula open posteriorly. Acetabula of middle coxæ extended to the epimera. Episterna of metathorax very broad in front, gradually narrowed to a point posteriorly. Wing-vein Cu 1 simple, Cu 2 absent.

This group is formed for a single genus, *Thranius*, Pasc., which was included by Lacordaire in his group *Necydalides.* The affinities of this genus are doubtful, but it certainly cannot be associated with *Necydalis,* a genus which is now generally recognised as belonging to the *Lepturinæ.*

Genus **THRANIUS.**

Thranius, *Pascoe, Trans. Ent. Soc.* (2) v, p. 22 (1859); *Lacord. Gen. Coléopt.* viii, p. 470 (1869).
Singalia, *Lacord. Gen. Coléopt.* ix, 2, p. 834 (1872).

Type, *T. gibbosus*, Pasc.

Range. Oriental Region and Japan.

Head strongly inclined above; front vertical, flat and subquadrate; palpi short; eyes rather large and prominent, feebly emarginate, with very short upper lobes which do not extend behind the antenniferous tubercles, the latter somewhat prominent on the inner side. Antennæ extended to the apical fifth or fourth of the elytra in the ♂, and a little past the middle in the ♀; the joints cylindrical, first slightly curved, third as long as the fourth and fifth united; fourth to tenth subequal in length, eleventh a little longer than the tenth. Prothorax parallel-sided, scarcely longer than broad; the disc raised in front so as to form a more or less distinct laterally compressed gibbosity. Elytra elongate, almost flat above, deflexed at the sides only where they cover the thorax, narrowed from the base up to the middle or nearly so, and thence either parallel-sided or gradually widened to within a short distance of the apex, each acuminate at the apex, usually ended in a spine. Front coxæ contiguous, their acetabula open posteriorly; acetabula of the middle coxæ extended to the epimera. Femora clavate, the hind pair much shorter than the abdomen; tarsus of the hind legs about half the length of the tibia, with the first joint as long as the next two united. Episterna of metathorax very broad in front, narrowed almost to a point posteriorly.

I. *Elytra dehiscent only near the apex; each more than half as broad at middle as at base.*

266. **Thranius gibbosus,** *Pascoe, Trans. Ent. Soc.* (2) v, p. 22 (1859).
Singalia spinipennis, *Lacord. Gen. Coléopt.* ix, p. 835 (1872).

Fulvous or testaceous; the head marked in front with a median dark brown line or band; prothorax brown above; elytra with a large brown spot at the base surrounding the scutellum, a dark brown patch on each before the middle and another behind the middle; these dark brown areas so variable in extent that in some specimens the elytra might more fitly be described as dark brown, with an arcuate fulvous band near the base, another at the middle, and the apex also broadly fulvous; antennæ dark brown, with the eighth and ninth joints pale fulvous. Pronotum raised in front in a rather strong laterally compressed gibbosity, which is finely asperate on top. Elytra densely and somewhat asperately punctured, approximate at the suture for almost their whole length, gradually narrowed from the base to the middle, and thence to the apex of almost equal width, each acuminate at the apex and terminated in a sharp spine. Body faintly covered above with very short tawny grey pubescence; somewhat more densely clothed beneath with grey pubescence that gives silvery reflections in certain lights.

Fig. 89.
Thranius gibbosus, Pasc., ♀. × 7/6.

Length 14–22; *breadth* 3–5 mm.

Hab. Southern India: Nilgiri Hills; Ceylon.

267. **Thranius simplex,** *Gahan, Ann. Mus. Civ. Genov.* xxxiv, p. 15 (1894).

Dark brown, or sometimes almost black in colour; the head and prothorax faintly clothed with yellowish pubescence; the breast in the middle and the abdomen testaceous; the legs more or less testaceous, with the clavate portion of the femora and the tibiæ in part piceous or black; antennæ dark brown or black, with the eighth and ninth joints fulvous yellow. Antennæ extended to the apical fifth of the elytra in the ♂, and to the apical third in the ♀; first joint closely and rather finely rugulose-punctate. Prothorax with a strong, laterally compressed gibbosity on the fore part of the disc which is subvertical in front and almost horizontal above; the gibbosity rather densely asperate. Elytra approximate at the suture for almost their whole length; narrowed slightly from the base for about one-third of their length,

thence of nearly equal width up to the apex, where they are narrowed and end each in a sharp spine; the surface densely punctate, with the front edges of the punctures slightly raised.

Length 16–23; *breadth* $3\frac{1}{4}$–5 mm.

Hab. British Bhutan (*L. Durel* in coll. Oberthür); Manipur (*Doherty*); Burma: Karen Hills (*Fea*).

In structural characters, such as the form of the gibbosity on the prothorax and the shape of the elytra, this species agrees pretty closely with *T. gibbosus*, Pasc. The examples from Bhutan which I have seen are much darker in colour than those from Manipur and Burma, and constitute a variety to which the name *nigrescens* may be given.

II. *Elytra dehiscent from before the middle; each less than half as broad at middle as at base.*

268. **Thranius triplagiatus**, sp. n.

Head, prothorax and body beneath fulvous, with a not very dense covering of fulvous yellow pubescence; antennæ black; elytra fulvous, each with the greater portion of the apical half, a transverse spot at the base and a large rectangular spot at the side a little behind the base, black. Antennæ of the ♀ extended to a little beyond the middle of the elytra; the first joint rugose-punctate. Disc of prothorax strongly but somewhat obtusely raised along the middle, sloped gradually posteriorly and more abruptly in front, its surface more or less asperate. Elytra dehiscent at about one-sixth of their length from the base; each narrowed thence up to about the middle of its length, and then gradually widened up to the apex, ending in a short point, not in a spine as in other species of the genus; the width of the elytron at the middle less than half what it is at the base; the surface rather densely asperate-punctate, with the dark areas more densely punctured.

Length 20; *breadth* 5 mm.

Hab. Manipur (*Doherty*).

269. **Thranius fryanus**, sp. n.

Reddish brown; the elytra paler, but marked each with a dark-brown spot behind the scutellum, another on the disc a little before the middle, and a dark longitudinal band that extends backwards from the middle and disappears before it reaches the apical dilated part; antennæ dark brown, with the first two joints and the greater part of the third reddish. Antennæ of ♀ extended only a little past the middle of the elytra; first joint densely and rather strongly punctured, second and third less densely and less strongly punctured; fourth to eleventh and apex of third very minutely and densely punctulate. Prothorax relatively rather broad; with the disc obtusely and not very

strongly raised in front, rather densely asperate and very faintly pubescent; the sides clothed with pubescence of a pale golden colour. Elytra narrowed from the base to the middle, approximate at the suture only in the anterior sixth of their length; each less than half as broad at the middle as at the base, narrow and of almost equal width from the middle up to about one-seventh of its length from the apex, then widened slightly, acuminate and ended in a sharp spine at the apex; the surface rather densely asperate-punctate, the punctures denser on the dark ante-median spot and posterior band. Sides of breast and abdomen with pale golden pubescence mixed with longer grey hairs.

Length 20; *breadth* $4\frac{3}{4}$ mm.

Hab. Tenasserim: Tavoy (*Doherty*).

Group *CLYTINI.*

Head short, vertical or subvertical in front; genæ generally rather long; eyes finely facetted, emarginate; mandibles short; palpi short, subequal, the last joint more or less triangular. Prothorax usually unarmed at the sides, varying in form from globular to cylindrical. Scutellum generally small. Front coxæ globular, as a rule not prominent; their acetabula rounded on the outer side, open posteriorly. Acetabula of middle coxæ open to the epimera. Hind legs generally long, the first joint of the tarsus much longer as a rule than the second and third united; spurs of hind tibiæ long. Tarsal claws widely divergent. The episterna of the metathorax generally rather broad, but in some forms more or less considerably overlapped by the sides of the elytra.

In this group I include the *Clytides* and *Anaglyptides* of Lacordaire, together with the genus *Demonax* of Thomson. Lacordaire's restriction of the group, on the one hand, to forms in which the antennæ are at most only a little longer than the body in the ♂, and, on the other, to those in which the first joint of the hind tarsi is distinctly longer than the next two joints united, is one which cannot be maintained. Within the group there is a regular gradation in the length of the antennæ from forms in which these organs are less than half the length of the body to others in which they are more than twice as long as the body; and so also in regard to the hind tarsi, the first joint is in some forms scarcely longer than the second, in others more than three times as long as the second and third united, while between the two extremes there is almost every intermediate degree. On account of the gradual modifications not only in these but in many other points of structure, the genera cannot be defined with any great amount of precision. In fact there is something to be said in favour of those entomologists who describe each new species of the group as a *Clytus*. The chief objection to this course is that, unless the structural characters are given somewhat in detail, it becomes quite impossible to identify the species.

Synopsis of Genera.

A. Antennæ more or less widely separated at base, the head between them either not raised or only slightly raised at the sides.
- a. Head carinate in front .... XYLOTRECHUS, p. 241.
- b. Head not carinate in front.
  - a'. Lateral margins of elytra straight or nearly straight.
    - a². First joint of hind tarsi less than twice the length of second and third united .... CLYTUS, p. 250.
    - b². First joint of hind tarsi twice as long as second and third united .... PERISSUS, p. 254.
  - b'. Lateral margins of elytra obliquely inclined near the base................ ISCHNODORA, p. 259.

B. Antennæ not widely separated at the base; two subapproximate, divergent elevations on head between them.
- a. First joint of hind tarsi much longer as a rule than second and third united.
  - a'. Antennæ not spined.
    - a². Antennæ rather closely approximated at base, third joint little or not longer than first; elytra moderately long .... CALOCLYTUS, p. 260.
    - b². Antennæ less closely approximated at base, third joint distinctly longer than first; elytra long and relatively narrow.
      - a³. Antennæ of ♂ little or not longer than body; episterna of metathorax with straight inner margin. RHAPHUMA, p. 271.
      - b³. Antennæ of ♂ one-third longer than body; episterna of metathorax with curved inner margin. CLYTOCERA, p. 279.
  - b'. Antennæ spined at apex of one or more of the joints from third to sixth; the spines sometimes very small and inconspicuous.
    - a². Third and fourth joints, sometimes also fifth and sixth, spined at apex, third joint longer than fourth .... DEMONAX, p. 280.
    - b². Third joint only spined at apex; this joint not longer than fourth, usually much shorter .... PSILOMERUS, p. 299.
- b. First joint of hind tarsi very little or not longer than second and third united.
  - a'. Elytra with feeble obtuse elevation at base, shoulders not carinate, epipleures not widened posteriorly .... OLIGOENOPLUS, p. 301
  - b'. Elytra with short dorsal crest or tubercle at base, shoulders carinate, epipleures slightly widened posteriorly. AGLAOPHIS, p. 303.

Genus XYLOTRECHUS.

Xylotrechus, *Chevrolat, Ann. Soc. Ent. Fr.* 1860, p. 456; *Lacord. Gen. Coléopt.* ix, p. 77 (1869).
Amauræsthes, *Chevr.* (in part.) *Mém. Soc. R. Sci. de Liége*, xviii, p. 327 (1863).

Type, *X. sartorii*, Chevr., a Mexican species.

Range. Both hemispheres. In the Western hemisphere not recorded south of Mexico, nor in the Old World from Africa or Australia.

Head vertical in front, not raised between the antennæ; the latter rather widely separated at the base, inserted under the lateral edges of the front, which appear as two more or less prominent carinæ continued downwards to a greater or less extent along each side; the front furnished in addition with from one to five more or less distinct carinæ. Antennæ shorter as a rule than half the body, sometimes extended to the middle of the elytra or a little beyond it in the ♂; first joint equal to or longer than the third; third to fifth subequal; sixth to tenth successively shorter, sometimes decreasing slightly in thickness. Prothorax more or less rounded at the sides, usually somewhat asperate or granulate on the middle of the disc. Elytra slightly narrowed backwards from the base, broadly truncate at apex. Legs moderately long; femora thicker in the ♂; the hind pair extend to a greater or less distance beyond the apex of the elytra in the ♂, but do not reach as a rule to the apex in the ♀. First joint of hind tarsus about twice as long as the next two joints united.

I. *Eyes large, extended on to the front; the face correspondingly contracted in the middle; pygidium of ♀ emarginate at apex.*

270. **Xylotrechus smei**, *Lap. et Gory* (Clytus), *Hist. Nat. et Iconogr. des Ins. Coléopt.* (*Mon. du genre* Clytus), p. 37, pl. 8, fig. 46 (1841).
Clytus vicinus *Lap. et Gory, l. c.* p. 38, pl. 8, fig. 47.

Brown above; with a greyish or yellowish pubescence that covers the head and most of the prothorax and forms bands and spots on the elytra, disposed as follows:—(1) a transverse band on each at the base, followed a little behind by (2) a short transverse spot; (3) a narrow band which begins near the scutellum, passes close by the suture, diverges a little from it posteriorly and at a short distance before the middle curves outwards to the side, thence it bends forward a little before reaching the margin; (4) a narrow, obliquely transverse, somewhat wavy band, placed a little behind the middle; (5) an apical band, which is slightly produced forwards at the suture. Body beneath marked with spots or bands of whitish pubescence. Vertex of head marked with a fine carina which divides anteriorly into two finer carinæ; front with four carinæ, the lateral ones oblique or slightly curved, the intermediate two

converge downwards and unite so as to form a single median carina on the lower part of the face. Prothorax rounded at the sides, widest behind the middle, narrowed gradually in front more strongly towards the base, slightly raised and subasperate along the middle of the disc; marked with two rounded dark brown spots on the disc and a smaller one on each side; the disc more or less infuscate in the middle, especially towards the base.

Length 11–17; *breadth* 3–5 mm.

Hab. Bhutan; Calcutta; Deccan.

This species varies considerably in colour and to some extent also in the markings. In some specimens the derm is of a yellowish-testaceous colour in parts, in others almost entirely dark brown. The pubescence is sometimes yellowish, sometimes ashy grey. The postmedian band of the elytra is often interrupted or broken up into spots, and occasionally almost disappears.

271. **Xylotrechus subscutellatus**, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 317 (1863).
Xylotrechus putzeysi, *Chevr. l. c.* p. 320.
? Xylotrechus insipiens, *Chevr. l. c.* p. 321.

Dark brown, with a tawny or greyish-tawny pubescence that covers the head and prothorax and forms bands on the elytra; prothorax with a median asperate band which is widened towards the base, two lateral spots on the disc, and a small spot on each side, black; the elytral bands arranged as follows:—(1) a band which crosses the base of each elytron from the shoulder, curves backwards near the scutellum and runs close along the suture for a short distance, then diverges from the suture and curves outwards to the side at about one-third from the base, turning forward a little before it reaches the outer margin; (2) a short, slightly oblique, transverse band on each a little behind the base; (3) a band that passes obliquely outwards from the suture at about two-thirds of its length from the base; (4) a band at the apex. Body beneath with a large spot of yellowish-white pubescence on the hinder half of each of the metathoracic episterna, sometimes with a smaller spot on the anterior part; a lateral transverse spot of the same kind on the posterior half of each of the first three abdominal segments. Vertex of head with a fine median carina which divides anteriorly into two finer ones; front with four carinæ, the lateral pair extended downwards as far as the middle of the front border of the eyes; the intermediate pair converge and unite below so as to form a single median carina on the clypeus. Antennæ reach a little past the base of the prothorax in the ♀, slightly longer in the ♂; the last two or three joints somewhat thickened. Prothorax rounded at the sides, widest behind the middle, narrowed gradually in front, more strongly towards the base.

Length 10–17; *breadth* 3–5 mm.

Hab. Ceylon; Travancore; Nilgiri Hills; Bombay.

This species is very closely allied to *X. smei*, Lap. & Gory, the differences which it presents are very slight. It is generally darker in colour, and the basal band of each elytron curves round by the scutellum and is continuous with the sutural band.

272. **Xylotrechus carinifrons**, *Lap. et Gory* (Clytus), *Hist. Nat. et Iconogr. des Ins. Coléopt.* (*Mon. du genre* Clytus), p. 65, pl. 12, fig. 75 (1841); *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 316 (1863).

Closely allied to *X. smei*, Lap. & Gory, and *X. subscutellatus*, Chevr. This species differs from both in that the white spot on the anterior part of each of the metathoracic episterna is nearly as large as the spot on the posterior part, also the two spots are joined. The elytra are light brown or slightly reddish in colour in the neighbourhood of the anterior, sutural band; this lighter coloured part is somewhat in the shape of a triangle with its base in front.

Length 9–15; *breadth* 2½–4 mm.

Hab. Ceylon.

273. **Xylotrechus buqueti**, *Lap. et Gory* (Clytus), *Hist. Nat. et Iconogr. des Ins. Coléopt.* (*Mon. du genre* Clytus), p. 86, pl. 16, fig. 99 (1841).

Xylotrechus siamensis, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 318 (1863).

Xylotrechus phidias, *Gahan* (*nec Newm.*), *Ann. Mus. Civ. Genova*, xxxiv, p. 21 (1894).

Dark brown, with greyish or tawny-yellow pubescence that covers the head and prothorax and is formed into bands on the elytra; prothorax without spot at the sides, the disc with a median band, which is widened and somewhat rounded at the base, narrowed in front, and two large lateral spots, black; elytral bands arranged as follows:—(1) a transverse band at the base; (2) a short sutural band which begins at a little distance behind the scutellum, at its hind end turns outwards almost at right angles and then passes straight across the elytron to the side; (3) a short transverse band a little behind the base, which is bent backwards at its outer end and almost touches the sutural band at its inner end; (4) a transverse band at about one-third from the apex, this band produced forward in a triangle at the suture and sometimes also angulated behind at the suture; (5) an apical band produced at the suture, with its front border strongly oblique. Body beneath with a pubescent white spot on each of the mesothoracic episterna, another near the antero-lateral angles of the metasternum, two spots on each of the metathoracic episterna, and four almost complete bands on the abdomen.

Length 7–13; *breadth* 2–3¾ mm.

Hab. Darjeeling; Burma; Andaman Is.; Siam; Java.

In the carination of the head and in other points of structure

this species agrees closely with *X. subscutellatus*, Chevr. In the ♂ the pubescence on the head, prothorax, and elytral bands is usually grey, in the ♀ tawny yellow; the discal band and spots of the prothorax are less distinct in the ♂, generally well-defined in the ♀; the hind femora reach a little past the apex of the elytra in the ♂, not beyond it in the ♀; the pygidium is rounded at the apex in the ♂, narrowly emarginate in the ♀.

274. **Xylotrechus stebbingi**, sp. n.

Brown; head and prothorax clothed with grey pubescence; the prothorax with four small brown spots in a transverse row across the middle—two dorsal and two lateral. Elytra subglabrous, testaceous brown, narrowly covered with grey pubescence at the base, marked with some small spots of ashy-grey pubescence which form three interrupted bands—one near the base, another just before the middle, the third midway between it and the apex; the apex also narrowly bordered with ashy grey. Body beneath covered with grey pubescence, a rather large posterior spot on each of the metathoracic episterna ashy white. Head with the lateral carinæ oblique, slightly curved, extending below almost to a level with the lower margin of the eyes; front narrowed between the eyes, furnished with two prominent convergent carinæ, which are united below. Antennæ less than half the length of the body; third joint slightly longer than the first. Prothorax widest behind the middle, very slightly narrowed in front, strongly narrowed towards the base; disc with a median asperate carina, which is broader and more strongly raised behind than in front. Femora rather strongly thickened; the hind pair extending a little past the apex of the elytra. First joint of hind tarsi twice as long as the second and third united.

Length 12–18; *breadth* $3\frac{1}{4}$–5 mm.

Hab. North-West Himalayas: Bashahr State (*E. P. Stebbing*); Tibet.

275. **Xylotrechus lateralis**, sp. n.

Dark brown; rather densely covered with pubescence, which is yellowish grey on the upperside, ashy white on the face and on the body beneath; prothorax marked above with a median black band and two small round black spots; elytra marked each with four somewhat oblong black spots in a row along the disc and a black band along each side, the third discal spot at about the middle, the fourth a little behind the third and somewhat distant from the apex; antennæ and legs ferruginous red, the femora somewhat brown. Head marked with a median black band in front, on which are placed two convergent carinæ which unite below and form a single carina on the clypeus; the lateral carinæ of the front extend downwards almost to a level with the lower

margin of the eyes. Prothorax ovate-cylindrical, almost as wide in the middle as the base of the elytra. Hind femora extend a little past the apex of the elytra in the ♀. Antennæ half as long as the body in the ♀; third joint subequal in length with the first, longer than the fourth or fifth.

Length 10; *breadth* 2½ mm.

Hab. Burma: Ruby Mines district (*Doherty*).

II. *Eyes smaller; face not contracted in the middle.*

A. *Sides of face nearly parallel; the carinæ straight.*

276. **Xylotrechus quadripes,** *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 315 (1863); *Dunning, Trans. Ent. Soc.* 1868, p. 126 & fig.

Black; with a greyish or yellowish pubescence that covers the greater part of the head and prothorax and forms bands on the elytra; disc of prothorax with a rounded, subasperate, black spot in the middle and a smaller black spot at each side; the elytral bands consist of the following: (1) a basal transverse band; (2) a short oblique band that points towards the shoulder in one direction and towards the angle of the next band in the other; (3) a band which begins a little behind the scutellum, runs close by the suture for a short distance, then diverges from it posteriorly and turns outwards to the side; (4) a transverse or slightly oblique band behind the middle which gradually widens towards the suture; (5) an apical band with oblique front margin. Body beneath with dense white pubescence along the borders of the metasternum and formed into a spot on each of the mesothoracic episterna, a large spot on each of the metathoracic episterna, and a lateral transverse spot on the posterior half of each of the first three abdominal segments; the fourth and fifth segments almost completely but less densely covered with greyish-white pubescence; legs black, the femora varying in colour from testaceous to black.

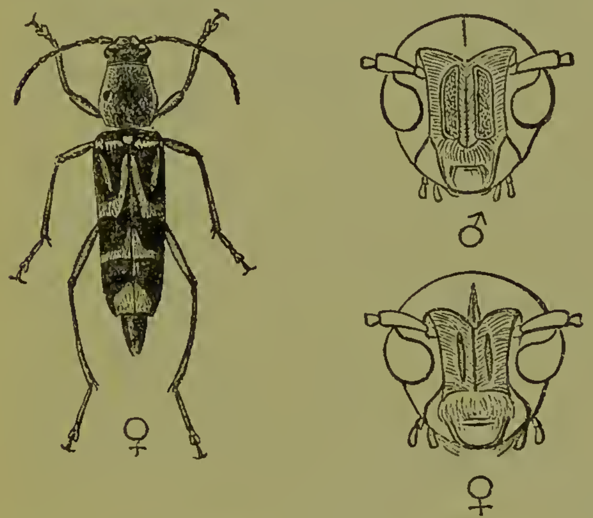


Fig. 90.—*Xylotrechus quadripes*, Chevr. × 7/4.

♂. Face with a more or less distinct median carina, between which and each of the lateral carinæ there is an elongated, very finely rugulose, opaque black area with slightly raised edges.

Hind femora extending by about one-fifth of their length past the apex of the elytra. ♀. Face with a single raised line or carina on each side midway between the median and lateral carinæ. Hind femora not reaching past the apex of the elytra.

Length 10–17; *breadth* 3–5 mm.

Hab. Madras: Coorg; Assam: Sylhet; Burma; Siam; Tonkin.

This species is well known as a "coffee-borer" in many parts of India.

277. **Xylotrechus subditus**, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 314 (1863).

Black; prothorax covered with leaden-grey pubescence, narrowly bordered with white at the base and front margin on each side, marked above with three black spots placed in a transverse row before the middle, the median spot largest, emarginate behind. Elytra black, marked each with a short oblique line and four bands of ashy-grey pubescence, the line placed above the shoulder; the first band entire, close to the base; the second, which begins behind the scutellum, follows the suture for a short distance, and near the middle of the elytron curves outwards to the lateral margin; the third runs transversely a little behind the middle and is slightly widened at the suture; the fourth, broader than the others, is placed at the apex. Body beneath glossy black; the middle of the prosternum, a quadrate spot on the mesosternum, the sides and hinder part of the metathorax, and three more or less complete bands on the abdomen covered with white pubescence. Head with five straight carinæ. Antennæ rather thick, extending to the base of the middle legs; first six joints black, the rest ashy grey. Prothorax globose, a little longer than broad, somewhat less narrowed in front than at the base, front and hind margins straight, the surface granulated. Elytra transversely truncate at the apex, the angles scarcely spined.

Length 12; *breadth* 3½ mm.

Hab. Kashmir.

This species has not been identified by me. The above description is an abstract from the one given by the author, who in his monograph places the species just before *X. quadripes*.

278 **Xylotrechus gestroi**, *Gahan, Ann. Mus. Civ. Genova*, xxxiv, p. 19, pl. 1, fig. 4 (1894).

Head and prothorax covered with yellow pubescence; the prothorax marked with dark brown above in the form of a cross with a narrowly triangular band that extends backwards from the end of each arm, and with a small, round, dark brown spot on each side. Elytra dark brown, somewhat velvety, marked with rather broad bands of yellowish pubescence; the anterior two bands are

somewhat curved, united along the suture, and form a somewhat X-shaped figure; the third band crosses transversely behind the middle and is prolonged anteriorly in the form of a triangle at the suture; the fourth band covers the apical fifth of the elytra except at the sides; in front of the anterior band the elytra are somewhat testaceous in colour, partly clothed with yellowish pubescence. Body beneath covered with yellowish pubescence, each of the last four abdominal segments dark brown and nitid in front; antennæ and legs testaceous, the hind femora infuscate towards the apex. Head with the lateral carinæ short, nearly straight; the face almost parallel-sided, marked with a slightly raised median black line below which divides above and runs along each side of a feeble median groove.

Length 11; *breadth* 3 mm.

Hab. Upper Burma: Shwègu, on the Upper Irrawaddy.

B. *Face gradually widened below; front with a median groove, the edges of which are slightly raised and meet below so as to form a short obtuse carina; the lateral carinæ oblique and very short.*

279. **Xylotrechus hampsoni,** *Gahan, A. M. N. H.* (6) v, p. 54, pl. 7, fig. 1 (1890).

Reddish brown, with bands and spots of sulphur-yellow pubescence, the intervening spaces on the elytra more or less densely covered with dark brown tomentum. Antennæ with the first four or five joints rufous, the rest black; third joint shorter than the first, not longer than the fourth; third to sixth or seventh setose behind, especially near the apex. Prothorax widest about the middle, narrowed towards the base and to a less extent in front, scarcely longer than broad; the disc with an obtuse, feebly raised, asperate ridge along the middle and a feebler elevation towards each side; marked with three transverse yellow bands—the first a little behind the front margin, interrupted in the middle, the second made up of four transverse spots, the third at the base, this extends downwards on each side and turning forwards, expands into a spot above the coxal cavity. Scutellum yellow. Elytra marked each with four yellow bands; the first, narrow and oblique, placed between the base and the middle; the second, triangular, just before the middle, its hind border straight and its front border oblique, almost parallel with the first band; the third band straight and rather narrow, placed at a short distance behind the middle; the fourth, less distinct than the others, runs parallel with the third at a little distance behind it; the spaces between the bands are dark brown and the anterior yellow band has in front of it a dark brown band which spreads forward at its inner end along the suture and scutellum. Body beneath reddish brown to dark brown, with spots of yellow pubescence on the episterna and bands on the metasternum and abdomen. Hind femora

extend by nearly one-fifth of their length past the apex of the elytra in the ♀ and by one-third of their length in the ♂. Pygidium of ♀ with a feeble sinuate emargination at the apex.

Length 15–17; *breadth* 4½–5 mm.

Hab. Southern India: Nilgiri Hills (*Sir G. Hampson*); British Bhutan (*in coll. Oberthür*); Assam (*Doherty*); Burma.

280. **Xylotrechus carinicollis**, *Jordan, Stett. ent. Zeit.* 1895, p. 269.

Reddish brown; head covered with orange-tawny pubescence, marked with a median black carina, which is longitudinally canaliculate except in its lower part; prothorax with a band of yellow pubescence at the base, and two transverse dark brown bands, one before the middle, the other in front of the basal yellow band, the intervening spaces covered with orange-tawny pubescence; scutellum brown at the base, yellow at the apex; elytra with a narrow band at the base and the apical fourth part reddish brown, the rest almost black, somewhat velvety, crossed completely by two yellow bands, one a little before, the other behind, the middle; the first band straight, the second, which is somewhat narrower, slightly curved backwards at the sides. Body beneath reddish brown, with the sides of the mesothorax, metathorax and abdomen more or less dark brown; the episterna of the mesothorax, a median spot on the prosternum, the hind border and an anterior transverse spot on each side of the metasternum, a spot on each of the metathoracic episterna, and a transverse spot at each side of the first four abdominal segments, densely covered with yellow pubescence; legs red. Antennæ thick, the first five joints red, the rest dark brown. Prothorax subglobose, widest just in front of the middle; disc granulate, an obtuse carina along the middle. Elytra a little broader than the prothorax, slightly narrowed backwards, dentate at the outer angles of the truncate apex. Mesosternum obtusely tuberculate in the middle. Hind femora extending by about one-fifth of their length past the apex of the elytra in the ♀.

Length 15½–18; *breadth* 4½–5 mm.

Hab. Assam: Khasi Hills.

281. **Xylotrechus incurvatus**, *Chevr.* (Amauræsthes) *Mém. Soc. R. Sci. de Liége*, xviii, p. 331 (1863).

Densely covered with pubescence, which is of a luteous-yellow colour on the head, prothorax and elytra, yellowish white on the body beneath; antennæ and legs testaceous, very faintly pubescent; carinæ of the head, five spots on the prothorax and some narrow strongly curved bands on the elytra black. Head with the lateral carinæ short and oblique, not extended downwards beyond the level of the upper margin of the anterior ocular lobe; the median carina distinct below, divided above by a narrow

groove, but becomes single again, though much finer, on the vertex. Antennæ reach almost to the middle of the elytra in the male; third to seventh joints setose posteriorly at the apex; third slightly shorter than the first, second a little longer than broad. Prothorax longer than broad, rather feebly rounded at the sides, widest in the middle, marked with an elongate median, and two small, rounded, lateral black spots on the disc, with another small black spot on each side. Scutellum pale yellow. Elytra a little broader than the prothorax, narrowed very slightly behind, dentate at the outer angles of the truncate apex; the black markings arranged on each as follows:—(1) a short narrow band extended back from the shoulder, curved inwards on to the disc and then bent forwards; (2) a narrow band which begins at or near the suture at about one-third from the base, then runs back a short distance, diverging at the same time from the suture, whence it is curved sharply round so as to run obliquely forwards to the side, where it again bends and passes straight out to the margin; (3) a narrow band which begins at the suture a little behind the middle, is directed obliquely forwards to the middle of the disc, and then bent so as to run obliquely backwards to the side; (4) a band similar to the third and placed about midway between it and the apex; (5) a lateral spot a little before the apex. Hind femora of the ♂ extend by about one-fourth of their length past the apex of the elytra; those of the ♀ only reach a little past it.

Length 10–15; *breadth* $2\frac{1}{2}$–4 mm.

Hab. Manipur (*Doherty*); Upper Burma: North Chin Hills (*Watson*).

282. **Xylotrechus contortus**, sp. n.

This species has the structural characters of *X. incurvatus*, Chevr., and a considerable resemblance to it in colour and markings; but the latter differ somewhat in form and position. The first elytral band is reduced to two spots, one behind the shoulder, the other on the disc; the second band runs back nearly twice as far as it does in *X. incurvatus* before it is curved round and runs forwards; the third band forms a much more regular arcuate curve; the fourth reaches neither to the suture nor to the outer margin, sometimes reduced to a mere crescentic spot; also it is placed much nearer to the third band than to the apex.

Length 12–15; *breadth* 3–4 mm.

Hab. Sikhim; British Bhutan; Manipur (*Doherty*).

283. **Xylotrechus subdepressus**, *Chevr.* (Amauræsthes) *Mém. Soc. R. Sci. de Liége*, xviii, p. 329 (1863).

Densely covered with ochreous-yellow pubescence, varied above with dark brown spots and bands. Head with the inner edge of each of the condylar cavities cariniform and slightly oblique, the

front widened below and with a more or less distinct median carina placed along a glabrous black spot. Antennæ half as long as the body in the ♂; brownish black, covered with grey pubescence; third joint shorter than the first and a little longer than the fourth. Prothorax rounded at the sides, almost as wide in the middle as the base of the elytra, a little narrowed towards the base; the disc somewhat asperate, marked just before the middle with a black spot. Elytra marked each with five dark brown spots, two of which, placed at the middle, sometimes coalesce and form an oblique band produced forwards a little at the suture; two of the spots are close to the base—one at the shoulder and the other near the scutellum; the third lunate or crescentic, convex posteriorly, at about one-fourth from the base; the last spot, placed a little behind the middle, forms a short transverse fascia slightly rounded in front and emarginate posteriorly; apices truncate and unarmed. Body beneath covered with yellow pubescence. Femora brownish black, rather densely punctulate, the hind pair extended beyond the apex of the elytra, more so in the ♂ than in the ♀; tibiæ and tarsi testaceous brown; first joint of hind tarsus almost twice as long as the second and third united.

Length 14–18; *breadth* 4–5 mm.

Hab. Sikhim: Mungphu (*Atkinson*); Assam: Sylhet and Sibsagar; Manipur (*Doherty*).

Genus CLYTUS.

Clytus, *Leicharting, Verz. Tyrol. Ins.* ii, p. 88 (1784); *Fab. Syst. Eleuth.* ii, p. 345; *Lacord. Gen. Coléopt.* ix, p. 67 (1869).
Europa, *Thoms. Essai Class. Ceramb.* p. 221 (1861).
Sphegesthes, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 333 (1863).

Type, *C. arietis*, Linn., a European species.

Range. Holarctic Region and Northern part of the Oriental Region.

Head very slightly raised at the sides between the antennæ; face vertical, more or less rectangular, not carinate. Antennæ rather widely separated at the base, much shorter than the body; third joint shorter than the first, longer than the fourth or following joints; seventh or eighth to tenth successively shorter, but as thick, or thicker than, the joints preceding them. Prothorax evenly convex above, strongly rounded at the sides, more or less constricted at the base, very slightly, if at all, longer than broad. Elytra moderately long, convex above, more or less parallel-sided, truncate at the apex. Femora more or less gradually thickened; the hind pair extended to the apex of the elytra or a little beyond it in the ♂, not quite to the apex in the ♀. First joint of the hind tarsi as long at least as the remaining joints united. Episterna of metathorax rather broad, with the sides nearly parallel for about four-fifths of their length.

284. **Clytus callizonus**, sp. n.

Head and prothorax brownish black; the face, except along a median line, densely covered with orange-tawny pubescence, a narrow border of the same colour behind the eyes; prothorax with a narrow band of pale yellow pubescence at the base; scutellum pale yellow. Elytra marked each with three distinct bands of yellow or yellowish-white pubescence, the apical border also yellow; the first two bands narrow, placed rather close to one another between the middle and the base, the first strongly oblique, not extended to the suture, the second less oblique, sometimes almost directly transverse, reaches to the suture; the third band placed at a short distance behind the middle, widened a little before it reaches the suture; all the intervening space and a narrow border behind the third band brownish black covered with dark tomentum; from the base to the first yellow band the elytra are almost bare of pubescence, densely punctate, somewhat reddish brown in colour, from the black border behind the third band up to the apical yellow band they are covered with tawny-brown tomentum. Body beneath brownish black, the last two or three abdominal segments somewhat reddish, an oblique spot on each of the mesothoracic episterna and a narrow posterior band on each of the first two abdominal segments densely covered with yellow pubescence; legs red; first four joints of the antennæ reddish, the rest dark brown. Antennæ much less than half the length of the body in both sexes, the last seven joints somewhat thickened. Prothorax strongly convex, rounded at the sides, constricted at the base, slightly longer than its width across the middle, the upper surface with a minutely and very densely granulated appearance. Elytra long, truncate at the apex with the angles obtuse. Hind femora extended to a little past the apex of the elytra in the ♂, not quite to the apex in the ♀, tibiæ equal in length to the femora; first joint of hind tarsus as long as the remaining joints united.

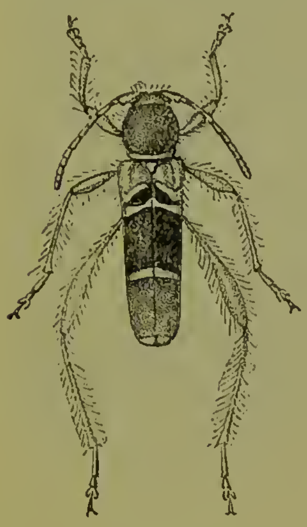


Fig. 91.
Clytus callizonus, Gahan.
× $\frac{6}{5}$.

Length 12–15; *breadth* 3–4 mm.

Hab. Upper Burma: Ruby Mines district (*Doherty*).

285. **Clytus monticola**, sp. n.

Dark brown, tomentose, banded above and below with yellow pubescence; first four or five joints of the antennæ reddish and subnitid, the rest black-brown and dull; legs reddish, the femora sometimes in great part dark brown. Head with a longitudinal band on each side of the front and a narrow transverse band above, of

yellowish pubescence. Antennæ not extended past the basal fourth of the elytra, third joint shorter than the first and not longer than the fourth. Prothorax rounded at the sides, more narrowed towards the base than in front, the disc with a median cariniform elevation posteriorly; a narrow border at the base and two transverse bands yellow—one band submedian, slightly bowed backwards in the middle, the other close to the front margin. Scutellum pale yellow. Elytra dark brown, reddish at the shoulders and near the apex, each with four yellow bands—the first short and slightly oblique, at one-fourth from the base; the second submedian, curved backwards from the suture to the middle of the disc and then forwards to the outer margin; the third and fourth directly transverse, placed one at one-fifth and the other at two-fifths from the apex. Body beneath dark brown, with transverse bands of yellow pubescence—one on the prosternum, two on the metasternum, and four or five on the abdomen; a spot on each of the meso- and metathoracic episterna also yellow. Hind femora not extended to the apex of the elytra; first joint of hind tarsus not quite so long as the remaining joints united.

Length 15–16; *breadth* 4¾ mm.

Hab. Kashmir; Western Tibet.

The next three species are unknown to me.

286. **Clytus simulator**, *Nonfried, Berl. ent. Zeit.* xxxviii, p. 340 (1893).

"Closely resembles *C. speciosus*; dark brown in colour and densely pubescent. Head and antennæ very short, covered with white pubescence, the former with isolated erect long hairs. Thorax cylindrical, with a slender elongated callosity in the middle, often coarsely punctured and very densely pubescent; in colour grey, except at the base and the lateral margins which are bordered with white; this white edging in two specimens extends only along half the length of the thorax. Elytra flat, parallel-sided, ending posteriorly in two slender short spines, densely punctured, clothed with dark brown pubescence, marked with white as follows:—a somewhat dusky white crescentic band close to the base across the elytra, over the suture, and extended almost to the underside; another that starts from the scutellum, along the suture, and at about one-third of the length of the elytra diverges sharply across at a right angle; following that a straight transverse band crosses the whole breadth of the elytra; finally, two white marks at the apex of the suture that are connected along the suture with the above by a white streak. Underside slightly shining, very finely punctured and clothed with blackish-brown pubescence; the long legs show similar sculpture, especially in those forms in which the hind pair are strikingly elongated.

"*Length* 14 mm."

Hab. Manipur.

287. **Clytus montanus**, *Nonfried, Berl. ent. Zeit.* xxxviii, p. 337 (1893).

"Blackish brown, clothed with dense and somewhat long yellowish-brown pubescence; the pubescence on the underside light yellow, not so dense as on the upperside. The pubescence on the head, the antennæ and thorax of even denseness, the eyes reddish yellow. The thorax itself is strongly arched, cylindrical, narrowed anteriorly, the sides strongly curved outwards. The clypeus rounded, somewhat paler in colour. Elytra parallel-sided, slightly broader at base, convex, ending posteriorly in two acute spines; very densely and finely punctured, clothed with long pubescence; marked with six blackish spots, of which two of elongate shape are placed between the pronotal convexity and the scutellum, two transversely in the middle, and two rounded ones below these. Underside clothed with beautiful light yellow pubescence, most densely between the breast and the abdominal segments; in the middle of the breast is a horseshoe-shaped mark of red pubescence. Legs whitish on the outer side, yellow beneath, the tarsi densely and completely covered with brown pubescence.

"*Length* 10 mm."

Hab. Manipur.

288. **Clytus minutissimus**, *Nonfried, Berl. ent. Zeit.* xxxviii, p. 339 (1893).

"Dark nut-brown, dull, and densely pubescent, spotted with white; beneath somewhat shining, very finely punctured with short pubescence; the lateral margins of the breast and of the abdominal segments covered with dense matted pubescence. Head with light grey pubescence. Antennæ longer than the head, with dull brown pubescence. The collar strongly convex, with rounded lateral margins, densely punctured and clothed with matted grey pubescence, with here and there solitary erect long hairs, the base and the margins narrowly white. Scutellum rounded, very small, grey in colour. Elytra massive, convex, parallel-sided, ending posteriorly in two very small spines, covered densely with dark nut-brown pubescence, spotted with white; the spots are placed in the following succession:—one arched spot on the pronotal convexity, from whence it extends up to the suture; a broader transverse spot about the middle of the length of the elytra; and, lastly, a whiter spot in the angle of the suture. Underside, especially along the whole margin of the breast and abdominal segments, with dense white pubescence. Legs long, nut-brown, with very short pubescence and erect brown solitary hairs.

"*Length* 6 mm."

Hab. Manipur.

Genus PERISSUS.

Perissus, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 262 (1863).
Amauraesthes, *Chevr.* (in part.) *l. c.* p. 327.

Type, *P. X-littera*, a species from the Aru Is.

Range. Oriental and Austro-Malayan Regions; Kashmir and Europe.

Head very slightly or not at all raised at the sides between the antennæ, the latter rather widely separated at the base, the distance between them almost or quite as great as that between the lower lobes of the eyes; face rectangular, not carinate. Antennæ variable in length, sometimes nearly as long as the body, generally very much shorter. Hind femora extend as a rule past the apex of the elytra in both sexes.

The structural differences between this genus and some of the forms included in *Xylotrechus* are very slight. The lateral edges of that part of the front which lies between the antennæ are sharp and slightly raised, as in *Xylotrechus*, but do not extend downwards to the eyes, and form merely the inner rim of the condylar cavities. The face has no median carina. The prothorax is usually longer and more cylindrical than in *Xylotrechus*, and the hind femora extend farther beyond the apex of the elytra.

289. **Perissus fuliginosus**, *Chevr.* (Amauræsthes) *Mém. Soc. R. Sci. de Liége*, xviii, p. 328 (1863).

Head and prothorax black, with a very faint covering of grey pubescence. Elytra dark brown, marked with very narrow bands of ashy-grey pubescence; the first band begins a little behind the scutellum, diverges from the suture as it runs backwards some distance, and is then curved round so as to extend outwards and a little forwards to the side, where it is again bent back just before it reaches the outer margin; the second band curves obliquely backwards and outwards from the suture behind the middle, and is interrupted near the middle of its course; the third band consists sometimes of two small transverse spots on each elytron, and is placed at a short distance before the apex. Antennæ extend a little past the middle of the elytra in the ♂, not so far as to the middle in the ♀; the first four joints brown and glossy, the rest dull, covered slightly with grey pubescence. Prothorax widest behind the middle, narrowed strongly at the base, gradually and slightly in front; the disc rather strongly asperate and slightly raised along the middle. Hind femora extend past the apex of the elytra slightly in the ♀, by nearly a third of their length in the ♂.

Variation. The elytra are sometimes of a paler (somewhat reddish-brown) colour between the base and the first band.

Length $7\frac{1}{2}$–12; *breadth* 2–$3\frac{1}{4}$ mm.

Hab. Northern India: Almora; Tibet.

290. **Perissus lætus**, *Lameere, Ann. Soc. Ent. Fr.* 1893, p. 283.
Perissus proprius, *Gahan, Ann. Mus. Civ. Genova,* xxxiv, p. 21 (1894).

♂. Black; head and prothorax faintly covered with grey pubescence, the prothorax with two black spots or a single large transverse one on the middle of the disc; scutellum black, bordered with ashy grey. Elytra blackish brown, marked with ashy-grey bands; the first band crosses at the base from the scutellum to the humeral depression, and is there turned slightly backwards; the second begins at the suture a little behind the scutellum, diverges from the suture as it passes backwards for some distance, then curves round and takes an anterior and outward direction, where it is again sharply bent backwards just before it reaches the outer margin; the third band is placed just behind the middle, it is narrow and slightly oblique in its outer half, produced in an angle both anteriorly and posteriorly at the suture; the fourth is a rather broad, somewhat oblique band placed at the apex. Body beneath closely covered with ashy-white pubescence; legs black, faintly covered with grey pubescence. Prothorax rounded at the sides, widest just behind the middle; strongly but rather sparsely asperate above. Antennæ reach a little past the middle of the elytra. The hind femora extend past the apex of the elytra by nearly one-third of their length.

♀. Elytral bands similar in form and position to those of the ♂, but of a yellowish-grey instead of an ashy-grey colour. Prothorax with an ill-defined, slightly curved, longitudinal band of yellowish-grey pubescence along each side of the disc. Antennæ not reaching to the middle of the elytra. The hind femora are more slender than in the ♂ and extend only a little past the apex of the elytra.

The single specimen described by Lameere has the elytral bands coloured as in the ♀, and has also two yellowish-grey bands on the prothorax. He may possibly have been mistaken in regarding the type as a ♂; but it is not very unusual to find specimens of both sexes sometimes coloured alike in species where usually there is a sexual difference in coloration.

Length 9–11; *breadth* 2½–3 mm.

Hab. Assam: Patkai Mts. (*Doherty*); Tenasserim: Thagatá (*Fea*); Siam; Cambodia: Pnomhpenh (*Mouhot*).

Var. *adhærens.*—Agrees with the type in structure and colour, but differs in the form of the second and third elytral bands. The second band begins behind the scutellum, remains close to the suture as it passes backwards, and becomes gradually wider posteriorly; it then gives off a curved branch which follows the same course as the corresponding band in the type; the third band, that behind the middle, is not dilated in the form of a triangle at the suture, but is somewhat arcuate in shape, broader in the middle and narrowed at the sides; a very narrow sutural band extends from it in front, and another posteriorly.

Length 9–12; *breadth* 2½–3 mm.

Hab. Upper Burma: Ruby Mines district (*Doherty*), North Chin Hills (*Watson*); Java.

291. **Perissus persimilis**, *Gahan, Ann. Mus. Civ. Genova*, xxxiv, p. 23 (1894).

This species has a considerable resemblance to *P. lætus*, Lameere, but differs from it by the following characters:—Prothorax more cylindrical, not bulging out at the sides, without a black transverse space above. Scutellum entirely covered with ashy-grey pubescence. The second band on the elytra begins a little behind the scutellum, diverges more widely from the suture as it passes backwards, then curves round, and reaches the outer margin without undergoing a second bend.

Length 8 mm.

Hab. Tenasserim: Thagatá (*Fea*).

292. **Perissus nilgiriensis**, sp. n.

Black; head and prothorax faintly covered with greyish pubescence. Elytra dull black, tomentose, with four bands of ashy-grey pubescence—the first band extends transversely at the base for a short distance from the scutellum, which also is ashy grey in colour; the second band begins at the suture a little behind the scutellum, curves backwards to the middle of the disc, which it reaches at about one-third from the base, and then bends round so as to run obliquely towards the outer margin; the third band is placed transversely at a short distance behind the middle, and gradually widens out towards the suture; the fourth band is at the apex. Body beneath ashy grey, whitish at the sides of the metathorax and abdomen, with a white spot on the mesothoracic episterna. Antennæ slightly longer than half the body in the ♀, extending to the apical fourth of the elytra in the ♂; last seven joints a little dilated. Prothorax subcylindrical, narrowed at base, scarcely narrowed in front, almost as broad as the elytra; the disc strongly but somewhat sparsely asperate, subglabrous along the middle. The hind femora extend past the apex of the elytra by a third of their length in the ♂. First joint of hind tarsi more than twice the length of the second and third united.

Length 7–8; *breadth* 2 mm.

Hab. Southern India: Nilgiri Hills (*Sir G. F. Hampson*).

293. **Perissus mutabilis**, *Gahan, Ann. Mus. Civ. Genova*, xxxiv, p. 23 (1894).

Head and prothorax varies in colour from ferruginous red to black, faintly covered with greyish pubescence, the prothorax with a transverse subnude space on the middle of the disc, the basal

margin on each side white; scutellum white; elytra dull velvety black, banded with ashy and grey pubescence; the first band begins at the suture just behind the scutellum, passes obliquely backwards, then diverges from the suture, and turns almost transversely towards the outer margin, which it nearly reaches; the second is a transverse or slightly arcuate band of an ashy-white colour, which crosses at about the middle and gradually widens towards the suture; the third is a transverse band of a darker grey colour, which covers a little more than the apical fifth of the elytra. Body beneath with the first two abdominal segments and two bands on each side of the breast, one longitudinal the other oblique, ashy white; the hinder segments of the abdomen covered with dark grey pubescence. Head minutely granulose, not raised between the antennæ, the front regularly rounded off above so as to form a continuous curve with the vertex. The antennæ extend some distance beyond the middle of the elytra in the ♂, not to the middle in ♀; apical joints slightly thickened in ♀. The hind femora extend past the apex of the elytra by more than a third of their length in the ♂, and by about one fourth of their length in the ♀.

Length 8–14; *breadth* 2–4 mm.

Hab. Sikhim; Burma: Ruby Mines district (*Doherty*); Tenasserim: Thagatá (*Fea*); Siam.

294. **Perissus aper**, *Chevr.* (Xylotrechus) *Mém. Soc. R. Sci. de Liége*, xviii, p. 326 (1863).

Black; head covered with ashy-grey pubescence, an elongate median spot on the face and two small rounded spots on the vertex glabrous; prothorax with a broad longitudinal black band that extends along the middle of the disc and gradually widens posteriorly, the sides and the rest of the disc densely covered with ashy-grey pubescence; scutellum white; elytra marked each with a short, narrow, median, ashy-grey vitta at the base and two oblique ashy-grey bands, the first a little before, the second behind the middle, the first band interrupted near the middle of its length, the second prolonged anteriorly along the suture; from the second band a sutural vitta of the same colour extends to the apex, widening out a little posteriorly; body beneath black, densely covered with ashy-grey pubescence at the sides and between and behind the middle coxæ. Head densely punctate on the glabrous black spots, the spot on the face sometimes marked with a few very feebly raised lines. Antennæ less than half the length of the body, the last seven joints thickened and opaque, first four subnitid, third shorter than first, scarcely longer than fourth. Prothorax subcylindrical, longer than broad, narrower than the elytra. Elytra gradually and slightly narrowed from base to apex; outer angles of the truncate apex feebly dentate. Hind femora extend by nearly one-third of their length past the apex of the elytra in

the ♂, slightly past the apex in the ♀. First joint of the hind tarsus about equal in length to the remaining joints united.

Length 9–11; *breadth* 2½–3 mm.

Hab. Southern India: Nilgiri Hills, Madras.

295. **Perissus dohertii**, sp. n.

Head, prothorax and elytra densely covered with yellowish-grey pubescence; the elytra marked each with a small dark brown spot close to the shoulder, another at the side just behind the shoulder; a narrow dark brown band crosses the disc obliquely backwards from near the suture to the side and there is slightly bent round; a second narrow dark brown band crosses the disc transversely a little behind the middle; body beneath covered with luteous-white pubescence; legs and antennæ reddish. Antennæ of ♀ less than half the length of the body; third joint slightly shorter than the first, longer than the fourth, sixth to tenth gradually thicker. Prothorax ovate-cylindrical, narrowed at base, almost as wide in the middle as the base of the elytra. Elytra parallel-sided. The femora of ♀ extend a little past the apex of the elytra.

Length 8; *breadth* 2 mm.

Hab. Manipur (*Doherty*).

296. **Perissus myops**, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 267 (1863).

Rather narrow; densely covered above with ashy-grey pubescence; prothorax with two small black spots just before the middle; scutellum white; elytra marked along each side with three large, nearly equidistant, black spots; these spots extend from the outer margin up to or a little beyond the middle of the disc, the first behind the shoulder, the second at the middle, the third at some distance from the apex; body beneath covered with ashy-white pubescence at the sides; abdomen with a black band along the middle; legs and antennæ black, faintly covered with ashy-grey pubescence. The antennæ reach about to the posterior third of the elytra. Prothorax subcylindrical, longer than broad. Elytra transversely truncate at the apex, outer angles subacute, the sutural ones obtuse.

Length 9; *breadth* 2½ mm.

Hab. Ceylon: Dikoya district (*G. Lewis*).

This species at first sight might be readily mistaken for *Demonax walkeri*, Pasc., owing to its great similarity in size, form, colour and markings, and attention should be paid to the generic difference in the structure of the head and antennæ in order to distinguish between them.

297. **Perissus parvulus**, sp. n.

Blackish brown, varying sometimes to reddish brown; antennæ with the first few joints testaceous, the rest dark brown; pro-

thorax very narrowly bordered with yellow pubescence at the front margin and at the sides of the basal margin; scutellum yellow; elytra ferruginous at the base, each marked with two rather narrow bands of yellow pubescence—the first obliquely transverse, placed a little before the middle, the second directly transverse, at an equal distance behind the middle; the first band narrowed and slightly curved forwards at its inner end, not reaching to the suture, the second gradually widened towards the suture, which it reaches. Antennæ distant at base, extending little past the base of the elytra in the ♀, the last seven joints gradually thicker. Prothorax as wide in the middle as the base of the elytra, narrowed towards the base, and only very slightly in front, its length not greater than its width at the middle, the surface very closely punctate all over. Body beneath dark brown, with spots of yellow pubescence on the episterna of the meso- and metathorax and on the sides of the first two abdominal segments. Hind femora of ♀ reach a little past the apex of the elytra. First joint of hind tarsi longer than the remaining joints united.

Length $5\frac{1}{2}$–$8\frac{1}{2}$; *breadth* $1\frac{1}{4}$–2 mm.

Hab. Ceylon: Dikoya district (*G. Lewis*), Peradeniya (*E. E. Green*).

Genus **ISCHNODORA.**

Ischnodora, *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 332 (1863); *Lacord. Gen. Coléopt.* ix, p. 72 (1869).

Type, *I. macra*, Chevr.

Range. India.

Head subvertical in front; antennal supports feebly raised, widely separated. Antennæ not reaching to the middle of the elytra, slender; third joint longer than the first or fourth, fifth subequal to the third, sixth to eleventh successively shorter and thicker. Prothorax subcylindrical, much longer than broad, slightly wider in the middle. Elytra long, narrowed slightly from the base for about one-third of their length, parallel-sided for the rest, scarcely or not at all narrowed at the apex, which is very broadly truncate; vertically deflexed at the sides in the anterior third, the deflexed part gradually widened towards the base.

298. **Ischnodora macra,** *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 332 (1863).

Long and narrow, brownish black; head and prothorax with a very faint grey pubescence; scutellum bordered with white pubescence; each elytron marked with two narrow pale bands covered with white pubescence—the first band begins near the scutellum, runs close by the suture for a short distance, then slightly diverges from it and at about one-third from the base turns and extends obliquely to the outer margin; the second is placed a little behind the middle and crosses obliquely from the suture to the outer

margin; the apex is broadly but not very densely covered with white pubescence so as to form a third band; the derm beneath is, however, not pale as in the case of the other two bands. Head and prothorax very closely and rather finely punctured; disc of prothorax sparsely granulate. Body beneath dark brown, with spots of white pubescence on the mesosternum and metathoracic episterna, and four narrow transverse bands on the abdomen.

Length 12½; *breadth* 2 mm.

Hab. Assam: Khasi Hills.

Genus CALOCLYTUS.

Anthoboscus, *Chevr.* (in part.), *Ann. Soc. Ent. Fr.* (3) viii, p. 455 (1860).

Chlorophorus, *Chevr.* (*nec Robineau-Desvoidy*), *Mém. Soc. R. Sci. de Liége*, xviii, p. 290 (1863).

Isotomus, *Mulsant* (*nec Blanch.*), *Coléopt. de France, Longic.* ed. 2, p. 143 (1863–4).

Caloclytus, *Fairm. in Jac. du Val. & Fairm. Gen. Coléopt. d'Europe*, iv, p. 145 (1864).

Clytanthus, *Thoms.* (in part.) *Syst. Ceramb.* p. 190 (1864); *Lacord.* (in part.) *Gen. Coléopt.* ix, p. 68 (1869).

Type, *C. speciosus*, Schneid., a European species.

Range. Palæarctic and Oriental Regions, a few species occur in Australia and Africa.

Head with a slight, subacute elevation on each side between the antennæ. Antennæ rather closely approximated at the base, the distance between them distinctly less than that between the lower lobes of the eyes; variable in length, but nearly always shorter than the body, very rarely extending to the apex of the elytra in the ♂, not spined at the apex of the joints. Prothorax oblong-oval or subglobular, longer than broad. Elytra moderately long, truncate at the apex, with the outer angles dentate. Femora more or less gradually thickened; the hind femora usually extend past the apex of the elytra in both sexes; middle femora in many of the species, the hind pair also in some, furnished with a fine carina along each side. First joint of the hind tarsi much longer as a rule than the next two joints united.

This genus includes a very large number of species, which are generally a little narrower and less robust than those of *Clytus* and *Xylotrechus*, with the antennæ somewhat longer, less thick, and much more closely approximated to one another at the base. In the type, *C. speciosus*, the antennæ are longer than usual, and in other respects also this species is by no means typical of the great majority of the forms included in the genus. The name *Clytanthus*, Thoms., by which the genus is generally known, has a doubtful priority over *Caloclytus*, but should, in my opinion, be restricted to certain Central-American forms that agree in structure with *C. tricolor*, Chevr., the species indicated by Thomson as the type of his genus.

299. **Caloclytus annularis**, *Fab.* (Callidium) *Mant. Ins.* i, p. 156 (1787); *id.* (Clytus) *Syst. Eleuth.* ii, p. 352 (1801); *Lap. et Gory* (Clytus), *Hist. Nat. et Iconogr. des Ins. Coléopt.* (*Mon. du genre* Clytus), p. 102, pl. 19, fig. 121 (1841); *Chevr.* (Chlorophorus), *Mém. Soc. R. Sci. de Liége,* xviii, p. 290 (1863).

Rather densely covered above with yellow pubescence, varied with dark brown or almost black markings, distributed as follows:—three spots on the pronotum—one median, bifurcated posteriorly, and one, obliquely oval, on each side before the middle; two bands and a rounded spot on each elytron, the first band somewhat elliptical in form, with its longer axis extending from near the shoulder to the middle third; the second band transverse, submedian, curved forwards along the suture about halfway to the base, expanded at its outer end into an oblique spot which reaches to the elliptical band in front and is united to it by a narrow point; the round spot lies about midway between the submedian band and the apex, and approaches more closely to the outer margin than to the suture. Body beneath with a dense whitish pubescence that covers almost the whole surface in the ♂, and forms more or less extensive spots at the sides in the ♀; the first three or four joints reddish brown, the rest darker, all faintly pubescent. Prothorax subglobose, as wide in the middle as the base of the elytra; marked with a fuscous spot on each side near the base, in addition to the black spots on the disc. Elytra truncate and quadridentate at the apex. Legs somewhat variable in colour, usually reddish brown, with the hind femora, except near the base, and the tibiæ to some extent, blackish; middle femora carinate on each side, the hind pair not carinate.

Length 10–15; *breadth* $2\frac{1}{2}$–4 mm.

Hab. Northern India, from the North-west to Assam; Burma; Siam; thence extending northwards to China and Japan, and southwards through the Malay Peninsula and Archipelago to New Guinea.

300. **Caloclytus sagittarius**, sp. n.

Densely covered above with yellow pubescence, varied with dark brown markings; prothorax with a median band that reaches from near the base to a little past the middle and there widens out in two rounded lobes; an arcuate band curves outwards from the front end of the median band to the middle of each side, and there joins an anterior spot; elytra each with (1) a short vitta that begins near the base, passes backwards, and then curves outwards and turns back towards the shoulder, so as to join there a small subhumeral spot; (2) a transverse median band, prolonged in a triangle both at the suture and at the outer end; and (3) a transverse band near the apex, wider at the outer end and narrowed slightly towards the suture. Antennæ about three-fourths of the length of the body, reddish brown, covered with greyish

pubescence; third joint not longer than the fourth. Prothorax subglobose, scarcely longer than broad, as wide in the middle as the base of the elytra. Prosternum, the epimera of the meso- and metathorax, two transverse bands on each side of the metasternum and a spot at each side of the first four abdominal segments densely covered with luteous-white pubescence. Legs reddish brown, faintly pubescent; middle and hind femora less distinctly carinate on each side; first joint of the hind tarsus not quite so long as the other joints united.

Length 12; *breadth* 3 mm.

Hab. Ceylon.

301. **Caloclytus agnatus**, *Chevr.* (Chlorophorus) *Mém. Soc. R. Sci. de Liége*, xviii, p. 292 (1863).

Densely covered above with ochreous-yellow pubescence, varied with black or dark brown markings disposed as follows:—a median cordate spot on the disc of the prothorax and a smaller rounded spot on each side just before the middle; two short vittæ near the base, a transverse band at the middle and a spot near the apex of each elytron; the outer and shorter of the two basal vittæ passes obliquely backwards from the shoulder on the side of the elytron; the inner vitta, placed on the disc, is curved with its convex side towards the suture; the median band is enlarged at its outer end and there forms an oblong spot at the margin, at its inner end it is bent obliquely forwards before it reaches the suture; the preapical spot is wider on the outer side where it touches the margin, and rounded on the inner side, which is somewhat removed from the suture. Antennæ about half as long as the body in the ♀, a little longer in the ♂, brownish-testaceous in colour, with a faint greyish pubescence. Prothorax longer than broad, as wide in the middle as the base of the elytra. Elytra very feebly dentate at the angles of the truncate apex. Body beneath nearly covered with a dense yellowish-white pubescence. Legs variable in colour from ferruginous to dark brown, with a faint covering of yellowish-grey pubescence; middle femora carinate on each side, the hind pair without carinæ; first joint of hind tarsus not longer than the remaining joints united.

Length 8–11; *breadth* $2\frac{1}{4}$–$2\frac{1}{2}$ mm.

Hab. Southern India: Nilgiri and Anaimalai Hills.

302. **Caloclytus jucundus**, *Perroud* (Clytus), *Ann. Soc. Linn. de Lyon*, (2) ii, p. 329 (1855).

Chlorophorus cognatus, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 291 (1863).

Var. Chlorophorus nepos, *Chevr. l. c.* p. 293.

Densely covered above with an ochreous-yellow pubescence, varied with black markings:—an elongated median spot on the disc of the prothorax reaches from near the front margin to a little

past the middle, where it is dilated, with a notch posteriorly so as to form two small lobes, and a round spot on each side before the middle ; on each elytron a transverse median band, three angulate spots (two anterior and one posterior) between it and the base, and one larger rounded spot between it and the apex ; the transverse band is slightly enlarged posteriorly at its outer end, which reaches the margin and is produced forwards so as to form a narrow triangle at the suture ; of the three anterior spots, the first is on the shoulder and reaches to the basal margin ; the second, more elongate, is on the inner part of the disc and is usually united posteriorly by a very short, narrow, oblique line or point with the third spot, which lies on the outer part of the disc ; the posterior rounded spot reaches to the outer margin, but not to the suture. [In the variety—*C. nepos*, Chevr.—this posterior spot is divided longitudinally by a narrow yellow line, and the median band also is interrupted by a yellow line near its outer end.] Antennæ half as long as the body, blackish, with a faint grey pubescence. Prothorax longer than broad, almost as wide in the middle as the base of the elytra. Elytra feebly dentate at the angles of the truncate apex. Body beneath blackish, with a faint grey pubescence in the middle and a dense whitish pubescence on the episterna, the borders of the metasternum and the sides of the abdominal segments. Legs varying in colour from black to reddish brown, with a faint covering of grey pubescence ; middle femora, and the hind ones more feebly, carinate on each side ; first joint of the hind tarsus not so long as the remaining joints united.

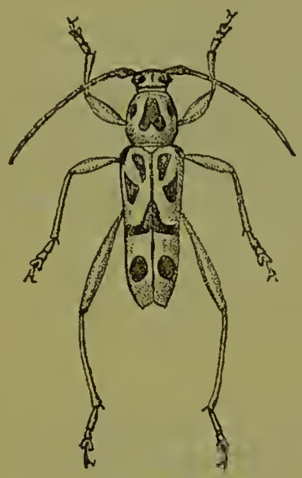


Fig. 92.
Caloclytus jucundus, Perr. × $\frac{7}{4}$.

Length 10–15 ; *breadth* 3–4 mm.

Hab. Southern India : Madras, Shimoga, Mysore. Chevrolat has given Sylhet, no doubt erroneously, as the locality of *C. cognatus* and "Inde anglaise" as the locality of *C. nepos*. An example of the latter form in M. Oberthür's collection, that agrees exactly with the type, is labelled Trichinopoly.

303. **Caloclytus arciferus**, *Chevr.* (Amauræsthes) *Mém. Soc. R. Sci. de Liége,* xviii, p. 330 (1863).

Densely covered above with an ochreous-yellow pubescence, varied with black markings disposed as follows :—a median bilobed spot on the disc of the prothorax and a small spot on each side just before the middle ; three bands on each elytron : the first curved inwards from the shoulder passes backwards along the disc rather nearer to the suture than to the side, then curves outwards and ends near the edge of the disc at about a third of its

length from the base; the second band is narrow, transverse, median, with a spot-like dilatation at the suture and another at the outer end, which is slightly removed from the margin; the third band, also narrow and transverse, is placed a little nearer to the apex than to the median band. Antennæ about half as long as the body, blackish, with a grey pubescence. Prothorax longer than broad, strongly rounded at the sides, not quite so wide in the middle as the base of the elytra. Elytra truncate at the apex, feebly dentate at the angles. Body beneath greyish pubescent along the middle, more densely pubescent and whitish at the sides. Legs black, with greyish pubescence; middle and hind femora carinate on each side, the hind pair feebly so.

Length 11–14; *breadth* $3\frac{1}{2}$–4 mm.

Hab. Darjeeling; Bhutan.

304. **Caloclytus socius**, sp. n.

Densely covered above with ochreous-yellow pubescence, varied with black markings disposed on each elytron as follows:—a short dorsal vitta that begins near the base and is curved outwards at its posterior end; a humeral spot that extends to the basal margin and a marginal spot just below and behind the shoulder; a spot at the middle of each side, from which a transverse band extends to the suture and bends obliquely forwards just before reaching it; lastly a large rounded spot between the median band and the apex. Antennæ half as long as the body, black, covered with cinereous-grey pubescence. Prothorax oblong-ovate, not so wide as the base of the elytra. Elytra feebly dentate at the truncate apex. Body beneath with a yellowish-white pubescence that covers most of the surface. Legs black with greyish pubescence; middle femora carinate on each side, the hind pair more feebly so; first joint of the hind tarsus as long as the other joints united.

Length 15; *breadth* 4 mm.

Hab. Darjeeling.

305. **Caloclytus distinguendus**, *Perroud* (Clytus), *Ann. Soc. Linn. de Lyon* (2) ii, p. 331 (1855); *Chevr.* (Rhaphuma) *Mém. Soc. R. Sci. de Liége,* xviii, p. 282 (1863).
Var. Rhaphuma russicollis, *Chevr. l. c.* p. 282.

Head and prothorax red, clothed with short, sparse, fulvous-yellow pubescence, the head sometimes (var. *russicollis*) blackish; elytra densely covered with yellow pubescence, varied with black markings, disposed on each as follows:—a curved band that begins at the shoulder, runs back a short distance and then curves round so as to extend forward on the disc not quite up to the base; a transverse band at the middle, prolonged anteriorly in a narrow triangle both at the suture and at the outer margin; a

large spot between the middle and the apex, rounded on the inner side, widened, especially posteriorly, towards the outer margin, which it reaches. Antennæ of the ♂ reach beyond the middle of the elytra, reddish in colour, sometimes (var. *russicollis*) with the first joint black; third joint not longer than the first or fourth. Prothorax ovate-cylindrical, narrower than the elytra. Body beneath black, with the pro- and mesosterna, the episterna, the borders of the metasternum and a lateral spot on each of the abdominal segments covered with a rather dense whitish pubescence. Legs ferruginous red, the femora sometimes (var. *russicollis*) pitchy black; middle femora carinate on each side, the hind pair not carinate; first joint of hind tarsus slightly longer than the remaining joints united.

Length 10–14; *breadth* 3–4½ mm.

Hab. Southern India: Pondicherry and Nilgiri Hills.

306. **Caloclytus rubricollis**, *Lap. et Gory* (Clytus), *Hist. Nat. et Iconogr. des Ins. Coléopt.* (*Mon. du Genre* Clytus), p. 88, pl. 16, fig. 102.

Var. andamanicus, *var. nov.*

Head black, prothorax red; elytra black or very dark brown, with ashy-grey bands; one crosses the base from near the shoulder, passes along the suture for a short distance and then turns so as to cross the elytron in a slightly oblique direction to the outer margin; a second transverse band some way behind the middle and a third at the apex; in addition to the bands there is a small, round, grey spot on the disc of each elytron close to the shoulder. Antennæ reach to the middle of the elytra; the first five joints are black; the rest reddish, closely covered with ashy-grey pubescence. Prothorax oblong-ovate, about one-fifth longer than broad, narrower than the base of the elytra. Elytra dentate at the angles of the truncate apex. Body beneath (the prothorax excepted) black, with the episterna, two transverse bands on the metasternum and one at the hind border of each of the first two abdominal segments, covered with dense white pubescence. Legs black, with a very faint grey pubescence; middle and hind femora carinate on each side.

Length 14½; *breadth* 3 mm.

Hab. Burma: North Chin Hills; Malay Peninsula; Java.

Var. *andamanicus.* Differs from the type as follows:—The legs and antennæ red; the elytra reddish brown, especially near the base, and the grey bands somewhat wider.

Hab. Andaman Islands.

307. **Caloclytus alboscutellatus**, *Chevr.* (Anthoboscus) *Mém. Soc. R. Sci. de Liège*, xviii, p. 307 (1863).

Densely covered above with grey pubescence, ashy-grey on the elytra, somewhat darker on the head and prothorax; scutellum white; elytra with three transverse black bands—one at the base,

one at the middle and the third a little before the apex. Antennæ a little longer than half the body, black, covered with grey pubescence; third joint subequal in length to the first and longer than the fourth. Prothorax about one-fourth longer than broad, rounded at the sides, not so wide in the middle as the base of the elytra. Elytra dentate at the outer angles of the truncate apex. Body beneath black with a faint grey pubescence, but with the first two abdominal segments, more or less, and spots on the middle and hind breast covered with dense white pubescence. Legs black with a faint grey pubescence; middle femora feebly carinate posteriorly, and near the apex in front; hind femora not carinate; first joint of the hind tarsus shorter than the remaining joints united.

Length 9; *breadth* 3 mm.

Hab. Southern India: Nilgiri Hills.

308. **Caloclytus 14-maculatus**, *Chevr.* (Anthoboscus) *Mém. Soc. R. Sci. de Liége*, xviii, p. 295 (1863).

Densely covered with yellowish-grey or ashy-grey pubescence, varied with black spots—four on the prothorax and five on each elytron. Of the prothoracic spots two are placed side by side very closely behind the middle and one on each side just before the middle; the elytral spots are placed—one, large and transverse, at the middle, three smaller between this and the base, and one almost equally large and transverse between it and the apex; one of the three anterior spots is at the side and equidistant from the other two, which lie, one before the other, on the disc. Antennæ half as long as the body, black, veiled with a grey pubescence; third joint longer than the fourth, but scarcely as long as the first. Prothorax oblong-ovate, not quite so wide in the middle as the base of the elytra. Elytra feebly dentate at the outer angles of the truncate apex. Body beneath covered with a dense white pubescence, except on the middle of the breast, which has a thinner and darker pubescence. Legs black, with grey pubescence; middle femora feebly carinate on both sides; first joint of the hind tarsus not so long as the remaining joints united.

Variation. The black spots on the elytra vary in size, and in some cases are so large that the elytra might be described as black, interrupted by narrow bands of grey pubescence.

Length 8–16; *breadth* $2\frac{1}{2}$–3 mm.

Hab. Southern India: Nilgiri Hills.

309. **Caloclytus moestus**, *Chevr.* (Anthoboscus) *Mém. Soc. R. Sci. de Liége*, xviii, p. 300 (1863).

Black; head covered with ashy-grey pubescence; prothorax dark grey, with a large black spot on the middle of the disc united by a transverse band to a smaller, round, black spot on

each side; scutellum white; elytra marked with an oblong ashy-grey spot behind the scutellum, another at each shoulder, a narrow, obliquely transverse band on each a little behind these, a transverse band behind the middle widened gradually towards the suture and a broad ashy-grey band at the apex. Body beneath black, glossy, with a large transverse spot on the prosternum; the episterna of the meso- and metathorax, the middle of the mesosternum, the sides and hind border of the metasternum, and a transverse band at the hind border of each of the first two abdominal segments, densely covered with white pubescence. Antennæ about half the length of the body; fifth to eighth joints ashy grey, the rest dark brown. Prothorax globose, alveolate-punctate. Elytra scarcely so wide as the prothorax and not more than twice as long. Middle femora with a fine carina along each side; hind femora not carinate, extending a little past the apex of the elytra in the ♀. First joint of hind tarsi about equal to the remaining joints united.

Length 9; *breadth* $3\frac{1}{2}$ mm.

Hab. Ceylon; Southern India: Pondicherry.

310. **Caloclytus melancholicus**, *Chevr.* (Anthoboscus) *Mém. Soc. R. Sci. de Liége*, xviii, p. 299 (1863).

Very closely allied to *C. moestus*, Chevr., and of the same colour; the chief and almost only difference is in the ashy-white markings of the elytra. These consist of a small oblong spot at each shoulder, a narrow band that begins behind the scutellum, continued a short distance along the suture, and then curved outwards to each side; a transverse band behind the middle which is more strongly produced anteriorly at the suture than the corresponding band in *C. moestus*, and a broad apical band. The species is relatively a little longer and narrower than *C. moestus*, but agrees with it in structural details.

Length 11; *breadth* 3 mm.

Hab. Ceylon.

311. **Caloclytus dohertii**, sp. n.

Black; densely covered with pubescence which is of a greenish-yellow colour on the head, prothorax and elytra and of a somewhat brighter yellow colour on the body beneath; elytra marked each with four or five rather small black spots—two close to the base, one, transverse, at the middle and one halfway between the middle and the apex; the fifth spot, when present, placed a little behind the basal two; antennæ and legs covered with ashy-grey pubescence. Antennæ reach to the middle of the elytra in the ♀, to a short distance beyond it in the ♂; third joint subequal in length to the first and scarcely longer than the fourth, fifth subequal to the third in ♀, slightly longer in ♂. Prothorax oblong-ovate, not so wide in the middle as the base of the elytra. Elytra

very feebly dentate at the angles of the truncate apex. Middle femora feebly carinate along each side; hind femora extending a little past the apex of the elytra in both sexes. First joint of the hind tarsi very slightly longer than the remaining joints united.

Length 10–13 mm.

Hab. Upper Burma: Ruby Mines district (*Doherty*).

312. **Caloclytus patricius**, sp. n.

Densely covered above with sulphur-yellow pubescence, varied with black and dark-brown markings disposed as follows:—a median tripartite black spot with one portion in front and two behind, on the disc of the prothorax and a round black spot on each side before the middle; four dark brown spots on each elytron—one, lateral, that passes obliquely downwards from the shoulder; the second, shaped like an inverted comma, on the disc near the base; the third, transverse, at the middle, narrowed somewhat towards the suture without reaching it; the fourth about midway between the third and the apex, rounded on the inner side and prolonged at the outer margin almost up to the apex. Antennæ reddish brown, less than half the length of the body. Prothorax a little longer than broad, as wide in the middle as the base of the elytra, marked with a fuscous spot on each side near the base, in addition to the black spots visible from above. Body beneath densely covered with whitish pubescence, the segments of the abdomen narrowly black at the front borders. Legs testaceous, with the hind tibiæ and apex of the hind femora dark brown; femora not carinate; first joint of the hind tarsus a little longer than the rest united.

Length 10–11; *breadth* 3 mm.

Hab. Western India: Belgaum.

313. **Caloclytus cingalensis**, sp. n.

Densely covered above with leaden-grey pubescence, the scutellum whitish and the thorax and elytra with black markings disposed as follows: a transversely oval median black spot on the disc of the prothorax and a smaller round spot on each side before the middle; a humeral black spot on each elytron, united at the base with a short dorsal vitta which is expanded and slightly curved outwards at its hinder end; a transverse spot or band at the middle that does not reach the suture and is expanded before and behind at the outer margin; a large spot between the middle and apex, rounded on the inner side and widened towards the outer margin. Antennæ a little longer than half the body; black, with grey pubescence, which is denser and more whitish on the last six joints; third joint subequal in length to the first and somewhat longer than the fourth. Prothorax subglobose, very little longer than broad, as wide in the middle as the base of the elytra. Elytra dentate at the outer angles of the truncate

apex. Body beneath black, covered with a faint grey pubescence; the episterna of the meso- and metathorax, two transverse bands on the metasternum and a band on each side of the first two segments of the abdomen covered densely with white pubescence. Legs black, with grey pubescence; femora not carinate; first joint of hind tarsus not so long as the remaining joints united.

Length 10–15; *breadth* 3–4½ mm.

Hab. Ceylon.

314. **Caloclytus ludens**, *Gahan, Ann. Mus. Civ. Genova*, xxxiv, p. 25, pl. 1, fig. 5 (1894).

Rather long and narrow; black; head and prothorax faintly covered with greyish pubescence, prothorax with a narrow band of ashy-white pubescence at the base; scutellum ashy grey; elytra black, banded with ashy-grey pubescence; the first band transverse at the base; the second begins at the suture just behind the scutellum, diverges slightly from the suture as it passes back some distance, then curves outwards and slightly forwards, stopping short on the side without reaching the outer margin; the third band, placed just behind the middle, is somewhat triangular in form with its apex anteriorly at the suture; the fourth is a broad transverse band at the apex; body beneath covered with pubescence, which is grey in the middle, whitish on the sides of the breast and abdomen. Antennæ piceous, covered with greyish pubescence, reaching about to the apical fourth of the elytra in the ♀. Prothorax subcylindrical, much longer than broad, slightly rounded at the sides. Elytra truncate at the apex, the outer angles shortly spined. First joint of the hind tarsus about equal in length to the remaining joints united.

Length 11 mm.

Hab. Tenasserim: Thagatá (*Fea*).

315. **Caloclytus assimilis**, *Hope* (Clytus), *Gray's Zool. Misc.* p. 28 (1831).

Black, densely covered with yellow pubescence, greenish-yellow above, of a somewhat whitish-yellow tint below; prothorax with three rather small, round, black spots, one on the middle of the disc, and one at each side visible from above; elytra marked each with two, or (?) one, brownish-black spot at the base, a rounded spot at the middle and another placed about midway between this and the apex; body beneath entirely covered with yellowish pubescence. Antennæ black, covered to some extent with greyish pubescence, and extended to the middle of the elytra; third joint longer than the first or the fourth; fourth and fifth subequal; sixth and seventh subequal, each shorter than the fifth; eighth to tenth shorter each than the seventh. Legs black, covered with grey pubescence; femora not carinate, the hind pair extend to the apex of the elytra.

Length 11 ; *breadth* 3 mm.

Hab. Nepal.

Of this species, I have seen only one specimen, the type, which is somewhat rubbed at the base of the elytra. From the slenderness of the hind femora and the length of the antennæ, it appears to be a female.

316. **Caloclytus ignobilis**, *Bates* (Clytanthus), *P. Z. S.* 1878, p. 721; *id. Scientific Results Second Yarkand Mission, Coleopt.* p. 22, pl. 1, fig. 20 (1890).

" Closely allied to *C. 4-punctatus.* Fuscous black, clothed with ashy-yellow pubescence. Each elytron with five spots, as in most specimens of *C. 4-punctatus*, as follow: one curved spot behind the scutellum, a small humeral spot, an anterior discal spot, one median generally transverse and one longitudinally oval spot close to it.

" Very closely allied to the Mediterranean *C.* (?) *4-punctatus* (F.); the only apparent difference being the larger size of the dark elytral spots. The thorax, however, appears to be a little more cylindrical and less convex both above and on the sides, and is furnished with a number of large scattered punctures (besides the close general puncturation), most conspicuous on the sides. The spot behind the transverse median spot of the elytra is further removed from the apex than in *C. 4-punctatus.*

" *Length* 6 lines.

" *Hab.* Murree. Two examples."

In *C. quadripunctatus*, Fab., the species referred to above, the femora are not carinate, and the hind pair are somewhat shorter than usual in this genus, those of the ♀ do not extend past the fourth abdominal segment.

317. **Caloclytus (?) parens**, *Allard* (Clytus), *Le Naturaliste* (2) viii, p. 189 (1894).

" This species closely resembles *C. plebejus.* The pattern of the elytra is nearly identical, only in *parens* these are a little narrower and more elongate ; the thorax is longer, not so wide and less rounded at the sides, it is also less convex and more finely punctured. The dark coloration of the elytra is a brownish red; the anterior white band completely surrounds the brownish-red humeral spot; the second white marking placed after the middle of the elytra is triangular, widened towards the suture and more transversely straight posteriorly. The elytra are slightly narrower, longer and truncated at apex. Beneath the body is black, finely pubescent. Antennæ and legs brownish ferruginous.

" *Length* 10 mm.

" *Hab.* Southern India: Madura."

Genus RHAPHUMA.

Rhaphuma, *Pascoe, Trans. Ent. Soc.* (2) iv, p. 240 (1858); *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 275 (1863); *Lacord. Gen. Coléopt.* ix, p. 72 (1869).
Raphuma, *Thoms. Essai Classif. Ceramb.* p. 221 (1861).
Arcyphorus, *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 287 (1863).

Type, *R. quadricolor*, Lap. & Gory, a species from the Philippine Islands.

Range. Oriental Region.

More or less narrow and elongate in form. Head with the face subvertical, generally longer than broad, slightly widened below; the antennal supports raised on the inner side, formed into a ridge, concave in the middle, between the antennæ. Antennæ subapproximate at the base, subequal in length to the body in the ♂, sometimes a little longer, sometimes shorter; always shorter than the body in the ♀; unarmed; third joint distinctly longer than the first. Prothorax oblong-ovate or subcylindrical, longer than broad. Elytra long, very slightly narrowed posteriorly, truncate at apex, the lateral margins sinuate in the middle in some of the forms, nearly straight in others. Legs long and generally rather slender, the hind femora extend past the apex of the elytra in the ♂. First joint of the hind tarsi as long at least as the remaining joints united. The episterna of the metathorax parallel-sided in the subgenus *Arcyphorus* and the forms most nearly allied to it; in other cases they appear narrowed in front due to the widening downwards of the elytra near the base. *Arcyphorus* is distinguished also by the middle femora, which are carinate in front.

I. *Lateral margins of elytra nearly straight.*

A. *Middle femora carinate in front* (s.g. Arcyphorus).

318. **Rhaphuma diana**, sp. n.

Black, densely covered with yellow pubescence, ornately marked above with black spots and bands; prothorax with two short, very closely approximated, slightly curved, longitudinal black bands on the disc and a rounded black spot on each side; the discal bands densely punctate, united in front for about a third of their length; each elytron with three longitudinal bands in front—a short one on the disc transversely united behind to its fellow, a longer one extending back from the shoulder, and a marginal band which extends from the base and joins a transverse spot placed just behind the middle; from the inner end of this spot a fourth longitudinal band extends forwards along the disc, it becomes narrower in front and ends a little behind the posterior end of the anterior discal band; two large marginal spots follow behind—one placed at nearly one-third from the apex, the other close to the apex;

antennæ and legs brown, faintly covered with grey pubescence. The antennæ extend to the middle of the elytra in the ♀, and to a short distance beyond it in the ♂; the hind femora extend a little beyond the apex of the elytra in the ♂, not quite to the apex in the ♀; middle femora carinate in front; first joint of hind tarsi nearly twice as long as the second and third united. Last ventral segment of ♂ with a broad, deep channel along the middle, the channel gradually narrowed and less deep in front; last ventral segment of ♀ gradually narrowed posteriorly, rounded at apex.

Length 13–14; *breadth* 2½–3 mm.

Hab. Burma: Karen Mts. (*Doherty*).

319. **Rhaphuma patkaina**, sp. n.

Narrow and elongate; black, densely covered with yellow pubescence; prothorax with two approximated, post-median black spots on the disc and a small round median black spot on each side; elytra marked each near the base with a short dorsal black vitta, which is joined posteriorly by means of a transverse, slightly curved band to a marginal band which extends back from the base; a black spot at the shoulder, two subelongate black spots at the middle and a slightly curved, transverse, black band at one-third from the apex. Antennæ extend nearly to the apical third of the elytra in the ♀; first four or five joints testaceous, the rest more or less dark brown, faintly covered with grey pubescence. Prothorax oblong-ovate, reticulate-punctate. Elytra transversely truncate at the apex. The hind femora reach to the apex of the elytra in the ♀; middle femora carinate in front along the distal half.

Length 12; *breadth* 2½ mm.

Hab. Assam: Patkai Mts. (*Doherty*).

This species resembles *R. diana* in colour and form, and agrees with it in the sculpture of the middle femora, which are carinate in front. It differs in the last respect from *R. phiale*, which it more closely resembles in the markings of the elytra. The male is not known.

B. *Middle femora not carinate.*

320. **Rhaphuma horsfieldii**, *White* (Clytus), *Cat. Coleopt. B. M., Longic.* p. 284 (1855).

Narrow and elongate; densely covered with yellow pubescence, which is somewhat paler in colour on the body beneath; prothorax marked above with two narrow, slightly curved, longitudinal dark brown bands that extend from near the base to a little in front of the middle and a small dark brown spot at each side; elytra marked each with two narrow, dark brown, longitudinal bands that extend to a short distance beyond the middle and are united at their posterior end by a narrow transverse band of the same

colour—the inner band at a short distance from the suture and not extended quite to the base in front, the outer band passes over the shoulder right up to the base; a narrow, dark brown, circumflex band, followed by a small spot, between these bands and the apex; antennæ and legs testaceous. Antennæ reach nearly to the apex of the elytra in the ♂, to the apical fourth in the ♀; third and a few of the following joints setose posteriorly at the apex, the third much longer than the first. Prothorax subcylindrical, slightly rounded at the sides, narrowed and marked with a transverse groove at the base. Elytra scarcely wider than the middle of the prothorax, dentate at the outer angles of the truncate apex. Hind femora extended past the apex of the elytra. First joint of hind tarsi twice as long as the next two joints united.

Length 10–15; *breadth* 2–3 mm.

Hab. Darjeeling; Naga Hills (*Doherty*); Manipur (*Doherty*); Burma: Ruby Mines (*Doherty*); (?) Java.

321. **Rhaphuma phiale**, sp. n.

Black, densely covered with yellow pubescence; prothorax with two short, longitudinal, black bands on the disc. Elytra marked each with two longitudinal black bands on the anterior third—one extending straight back from the shoulder, the other along the inner half of the disc; a large transverse black spot at the middle, an oblique, somewhat curved spot at one-fourth from the apex and a small marginal spot, sometimes wanting, just before the apex: the two anterior bands are united transversely behind, and the inner band is sometimes joined transversely just posterior to the scutellum with the corresponding band of the other elytron; the median transverse spot reaches from the outer margin almost to the suture, it is prolonged in front and posteriorly at its outer end; the lateral margins narrowly black. Antennæ and legs blackish, somewhat densely covered with greenish-grey pubescence. The antennæ extend to the apical fourth of the elytra in the ♂, to the apical third in the ♀. Prothorax subcylindrical, a little rounded in the middle, densely punctate at each side in the ♂, the punctate area divided anteriorly by a narrow impunctate band. Elytra more than three times as long as their width at the base, transversely truncate at the apex. Last ventral segment of ♂ with a somewhat triangular, glabrous, excavation at the apex, its hind margin acutely pointed in the middle; last segment of ♀ longer, not excavated, rounded at the apex. The hind femora reach to the apex of the elytra in the ♀, a little beyond it in the ♂. First joint of hind tarsi twice as long as the second and third united.

Length 12–14; *breadth* $2\frac{1}{2}$–3 mm.

Hab. Burma: Karen Mts. (*Doherty*).

This species somewhat closely resembles *R. horsfieldii*, White, in form, colour and markings: but the prothoracic black bands are broader and not raised, the anterior two elytral bands are much

shorter, the posterior spots are different, and the legs and antennæ are black.

322. **Rhaphuma fulgurata**, sp. n.

Head and prothorax black, densely covered with yellowish-grey pubescence; prothorax with two small, closely approximated, black spots just before the middle of the disc, another small black spot placed a little farther forwards on each side. Elytra chocolate-brown, tomentose, marked with bands of yellow pubescence as follows—(1) a short longitudinal band on the disc at the base; (2) a band made up of an oblong sutural spot, narrowly united posteriorly to an oblique discal spot; (3) a band behind the middle which runs obliquely forwards and outwards from the suture to the edge of the disc, and is then bent obliquely backwards towards the outer margin, this band is prolonged posteriorly at the suture, and a very narrow sutural band extends from it in front so as to reach the anterior sutural spot; (4) a transverse or slightly curved band at a little more than one-fifth from the apex, continued along the suture up to the apex. Body beneath brownish black, covered with yellowish-grey pubescence; antennæ and legs ferruginous red. Antennæ slightly longer than the body in the ♂, extending to the apical third of the elytra in the ♀. Prothorax oblong-ovate, with an asperate carina along the middle of the disc. Elytra three times as long as broad, somewhat obliquely truncate at apex. The hind femora extend a little past the apex of the elytra in the ♂, not to the apex in the ♀. First joint of hind tarsi twice as long as the second and third united.

Length 15–17½; *breadth* 3¼–4 mm.

Hab. Sikhim.

323. **Rhaphuma manipurensis**, sp. n.

Narrow and elongate; black; densely covered with pubescence, which is of a greenish-yellow colour on the prothorax and elytra, paler yellow on the head and on the body beneath. Elytra marked each with (1) three small black spots near the base—one on the shoulder, one a little farther back near the suture, the third in a line with the shoulder at about one-fourth from the base; (2) a narrow, sinuous, black band behind the middle, which is continued forward for some distance as a sutural band; (3) an oblique black band at about one-fourth from the apex; legs and antennæ testaceous. The antennæ extend to the middle of the elytra in the ♀, not far beyond it in the ♂. The hind femora reach to the apex of the elytra in the ♀, a little past it in the ♂. First joint of hind tarsi nearly twice as long as the second and third united.

Variation. The submedian and posterior black bands on the elytra are somewhat variable; the submedian band is sometimes reduced to a small crescentic spot, and the posterior band to a

short oblique line which reaches neither to the suture nor to the outer margin.

Length 13–16; *breadth* $2\frac{1}{2}$–$3\frac{1}{4}$ mm.

Hab. Manipur (*Doherty*).

324. **Rhaphuma sexnotata,** *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 279 (1863).

Narrow and elongate, yellowish testaceous, covered on the head, prothorax and elytra with a dense yellow pubescence. Elytra marked each with three small dark brown spots—one, longitudinal, at the shoulder and visible only from the side; the second, narrow and transverse, placed a short distance behind the middle of the disc; the third similar to the second and placed about midway between it and the apex. Antennæ testaceous, reaching almost to the apex in the ♂, and to the posterior fourth of the elytra in the ♀; third joint much longer than the first or fourth and a little longer than the fifth. Prothorax ovate-cylindrical, about one-fourth longer than its width across the middle, narrower than the elytra. Elytra three times as long as the prothorax; truncate, and scarcely dentate, at the apex; outer margins nearly straight. Body beneath rather densely covered with pubescence of a somewhat paler tint than that on the upperside. Legs testaceous, faintly pubescent; first joint of the hind tarsus twice as long as the second and third united.

Length 10–11; *breadth* $2\frac{1}{2}$ mm.

Hab. India.

II. *Lateral margins of the elytra more or less distinctly sinuate in the middle.*

325. **Rhaphuma placida,** *Pascoe, Trans. Ent. Soc.* (2) iv, p. 240 (1858).

Head black, covered in front and on the cheeks with buff-yellow pubescence; prothorax and elytra testaceous red, not very densely covered with yellowish-red pubescence, prothorax with a basal white spot on each side; elytra marked each with two brownish-black spots—a large one at the apex, bordered posteriorly with ashy-grey pubescence, a smaller one a little behind the middle, the latter spot with a small spot of ashy-white pubescence immediately in front of it. Body beneath blackish, the prosternum, mesosternum, the episterna of the meso- and metathorax, an anterior and posterior band on the metasternum, and a posterior transverse band, widened at the sides, on each of the abdominal segments more or less densely covered with white pubescence; antennæ with the first four or five joints testaceous, the rest brown; legs reddish, the hind femora dark brown at the apex, the hind tibiæ infuscate. Antennæ of ♀ extending about to the apical third of the elytra. Prothorax ovate-cylindrical, a little longer than broad, Hind femora of ♀ extending to the apex of the elytra; first joint of hind tarsi about equal in length to the remaining joints united.

Length $10\frac{1}{2}$–14; *breadth* $2\frac{1}{2}$–$3\frac{1}{4}$ mm.

Hab. Darjeeling; Burma; Celebes.

326. **Rhaphuma fallax,** *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 276 (1863).

Resembles *R. placida*, Pasc., in colour and structure, but differs as follows: only one black spot (that at the apex) on each elytron; on the ventral side, the abdomen only black; the antennæ and legs entirely yellowish testaceous. The front margin of the apical black spot is almost transverse, with a slight angulation near the middle, its hind border is, as in *R. placida*, covered with ashy-grey pubescence; on each elytron there is a small ashy-white spot just behind the middle. The body beneath is banded with white pubescence in a manner very similar to *R. placida*.

Length $13\frac{1}{2}$; *breadth* $2\frac{3}{4}$ mm.

Hab. Bengal.

327. **Rhaphuma præusta,** *Lameere, C. R. Soc. Ent. Belg.* 1890, p. ccxii.

Resembles *R. placida*, Pasc.; it is of the same colour above, the head black, the prothorax and elytra testaceous red, but there is only one black spot on each elytron, that at the apex; the front margin of this spot is somewhat rounded, the apical border is covered, as in *R. placida*, with ashy-grey pubescence; there is a very small ashy-white spot behind the middle of each elytron. On the ventral side, the abdomen only is black, the rest testaceous, banded with white pubescence in a similar way to *R. placida*. The legs and antennæ testaceous, the hind femora sometimes blackish at the apex.

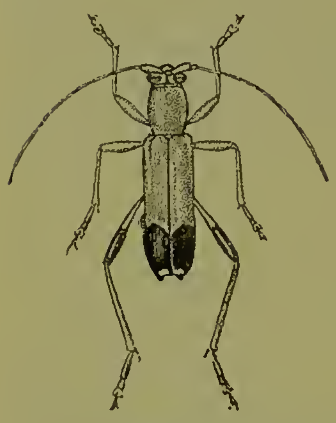


Fig. 93. *Rhaphuma præusta*, Lameere.

Length 12; *breadth* $2\frac{3}{4}$ mm.

Hab. Chutia Nagpur.

This species is possibly not distinct from *R. fallax*, Chevr., as it differs only in its somewhat more distinctly reddish colour, and has the front margin of the apical black spot of each elytron rounded instead of transverse.

328. **Rhaphuma rhea,** sp. n.

Head black, somewhat sparsely covered with ashy-white pubescence; prothorax dark red, very sparsely covered with tawny pubescence, the basal margin on each side narrowly bordered with white; elytra yellowish testaceous, densely pubescent, marked each with a round black spot a little before the apex. Antennæ testaceous, as long as the body in the ♂, shorter in the ♀; third and fifth joints subequal, each longer than the fourth and much longer than the first. Prothorax oblong-ovate densely punctate above, not so

wide in the middle as the base of the elytra. Elytra very feebly dentate at the outer angles of the truncate apex. Metasternum reddish brown, abdomen black; the episterna of the thorax and a transverse band, widened triangularly at the sides, on each of the first four abdominal segments, covered with dense white pubescence; the mesosternum and borders of the metasternum with a less dense whitish pubescence. Legs testaceous, with the femora and tibiæ of the hind legs dark brown towards the apex; first joint of the hind tarsus twice as long as the second and third united.

Length 10–11; *breadth* 2½ mm.

Hab. Southern India: Anaimalai Hills (*H. L. Andrewes*).

329. **Rhaphuma quinquenotata**, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 278 (1863).

Head black except at the lower border, closely covered with yellowish-white pubescence; prothorax reddish, more or less densely clothed with yellow pubescence; elytra pale testaceous, densely pubescent, marked with five black spots—one, elongate, placed at the suture a little before the middle, one across the middle of each elytron from the outer margin to within a short distance of the suture, and one, obliquely oval, on each between the middle and the apex; there is sometimes in addition a dark-brown spot behind each shoulder. Antennæ testaceous, reaching to the middle of the elytra in the ♀, beyond it in the ♂; third joint much longer than the first, fifth a little shorter than the third and longer than the fourth. Prothorax oblong-ovate, slightly longer than broad, almost as wide in the middle as at the base of the elytra, closely punctured on the middle of the disc, narrowly bordered with white at the basal margin on each side. Body beneath black, varied with bands and spots of white pubescence, the bands on the abdomen narrow in the middle and wide at the sides. Legs testaceous, with the middle femora, except near the base, and the hind femora dark brown, the tibiæ also more or less infuscate.

Length 11; *breadth* 2½ mm.

Hab. Southern India: Anaimalai and Nilgiri Hills.

330. **Rhaphuma trimaculata**, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 281 (1863).

Black, densely covered with greenish-grey pubescence; elytra marked with a sutural black band which extends from a little behind the scutellum nearly up to the middle and is slightly widened at each end, also with a small black spot on the middle of each at about one-third from the apex; body beneath covered with greenish-grey pubescence. Antennæ extend to the apical third or fourth of the elytra in the ♂. Episterna of metathorax strongly overlapped in front by the sides of the elytra. The hind femora extend by about one-fourth of their length past the apex

of the elytra in the ♂. First joint of hind tarsus nearly twice as long as the second and third united.

Length 9–9½; *breadth* 2–2¾ mm.

Hab. Southern India: Nilgiri Hills.

331. **Rhaphuma suturalis**, sp. n.

Black, rather closely covered with lead-grey pubescence; elytra marked with a narrow sutural black band which begins a little behind the scutellum and ends at a variable distance in front of the middle, the shoulders glabrous; body beneath grey, with the sides of the abdomen and a spot at each side of the meso- and metathorax yellow. Antennæ slightly longer than the body in the ♂, reach to the apical fourth of the elytra in the ♀; black, covered with grey pubescence. Prothorax oblong-ovate, finely and very densely punctulate. The hind femora extend by about a fourth of their length past the apex of the elytra in the ♂, by somewhat less in the ♀. Episterna of metathorax strongly overlapped in front by the sides of the elytra.

Length 9–10½; *breadth* 2–2½ mm.

Hab. Southern India: Nilgiri Hills (*H. L. Andrewes*).

This species resembles *R. trimaculata*, Chevr., in its narrow, elongate form, but differs from it in the colour of its pubescence, in the narrower sutural black band of the elytra, which, moreover, is not widened at each end, and by the presence of yellow spots at the sides of the breast and abdomen.

332. **Rhaphuma trinalba**, sp. n.

Black; head and prothorax rather closely covered with grey pubescence; elytra glossy black with three white spots in front, a rather broad bluish-grey transverse band behind the middle, and a similar band at the apex; one of the three spots placed at the suture almost immediately behind the scutellum, each of the others placed obliquely transverse on the lateral part of the disc at about one fourth from the base; body beneath ashy grey, with white spots at the sides of the meso- and metathorax and first three abdominal segments. Antennæ of ♀ reach to the apical third of the elytra; the joints unarmed, fourth slightly shorter than the fifth and distinctly shorter than the third; second one-third longer than broad. Prothorax oblong-ovate, narrower at base than in front. Elytra transversely truncate at the apex, feebly dentate at the outer angles. The hind femora extend by about a fifth of their length past the apex of the elytra in the ♀. First joint of hind tarsi nearly twice as long as the second and third united.

Length 7–8; *breadth* 2 mm.

Hab. Southern India: Nilgiri Hills (*H. L. Andrewes*).

This species resembles *Demonax divisus*, Chevr., in colour and markings, but may be readily distinguished from it by its completely unarmed antennæ.

333. **Rhaphuma elegantula**, sp. n.

Black; glabrous and nitid above; the elytra marked with pubescent white spots and bands as follows: a small indistinct ashy-white spot at each side of the scutellum, a small snow-white spot on the disc of each elytron at about one-fourth from the base, a narrow transverse snow-white band a little behind the middle, and a narrow ashy-white band at the apex; body beneath black covered in part with grey pubescence, with spots of dense white pubescence on the sides of the mesothorax, metathorax and first abdominal segment. Antennæ extend to the apical third of the elytra; third joint more than twice as long as the first; fourth and fifth subequal, united not much longer than the third. Prothorax rather strongly rounded at the sides, narrowed at the base, strongly and somewhat roughly punctured. Elytra very glossy, less strongly and somewhat sparsely punctate; truncate at the apex, feebly denticulate at the angles. Episterna of metathorax strongly overlapped in front by the sides of the elytra. Legs pitch-black, nitid; hind femora very sparsely punctate, extending by about a fourth of their length past the apex of the elytra. First joint of hind tarsus twice as long as the second and third united.

Length 5–6; *breadth* $1\frac{1}{4}$–$1\frac{1}{2}$ mm.

Hab. Nilgiri Hills (*H. L. Andrewes*).

Genus **CLYTOCERA**, gen. nov.

Type, *C. chionospila*, sp. n.

Range. Southern India.

Narrow and elongate in form. Head with the antennal supports distinctly raised so as to form a prominent ridge, rather broadly concave in the middle, between the antennæ. Antennæ one-third longer than the body in the ♂; second joint longer than broad; third and following joints slightly compressed, successively narrower, each almost equally broad throughout its length; fourth scarcely shorter than the third. Prothorax ovate-oblong, widest behind the middle; front margin slightly rounded. Elytra truncate at the apex; the lateral margins nearly straight. Episterna of metathorax narrowed considerably at the apex, the inner border rather strongly curved posteriorly. Legs long; coxæ prominent; femora subpedunculate at base, fusiform-clavate towards the apex, the hind pair extending far beyond the apex of the elytra in the ♂; first joint of hind tarsus almost three times as long as the next two united.

From *Rhaphuma*, Pasc., to which it comes nearest in general form and structure, this new genus differs as follows: the antennal supports more prominently raised and more divergent, the femora more strongly thickened, and the metathoracic episterna curved at the inner border and considerably narrowed posteriorly.

334. **Clytocera chionospila**, sp. n.

Varies from reddish brown to brownish black in colour, tomentose and dull above, with spots of snow-white pubescence on the prothorax, elytra and underside. Prothorax with a small post-median spot, a short, transverse basal lineole on each side above and a smaller spot on each side close to the coxal cavity. Elytra each with a small subsutural spot at some distance behind the scutellum, a discal spot before the middle, a short fascia obliquely from the suture behind the middle, a discal spot midway between this fascia and the apex and a transverse spot at the apex. Antennæ reddish brown, as long as the body in the ♀, about one-third longer in the ♂; second joint one-third longer than broad; third scarcely longer than the fourth and not longer than the fifth or sixth. Prothorax about one-fourth longer than broad in the ♂; widest behind the middle, gradually narrowed in front, and marked with a sulcate constriction close to the base; subasperate above, slightly raised along the middle. Elytra dentate at the outer angles of the truncate apices. Abdomen subglabrous and subnitid, the rest of the underside tomentose and dull; a spot on each of the meso- and metathoracic episterna, and four on each side of the abdomen, snow-white. Femora finely punctulate, subasperate beneath, and denticulate at the apical angles; the hind pair extending to the apex of the elytra in the ♀, and far beyond it in the ♂.

Length 7–12; *breadth* $1\frac{1}{2}$–$2\frac{1}{2}$ mm.

Hab. Southern India: Nilgiri Hills (*H. L. Andrewes*), Canara.

Genus DEMONAX.

Demonax, *Thoms. Essai Classif. Ceramb.* p. 226 (1861); *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 268 (1863).

Grammographus, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 285 (1863).

Elezira, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 637 (1869).

Type, *D. nigrofasciatus*, Thoms., a species from Batchian in the Malay Archipelago.

Range. Oriental Region and Austro-Malayan Subregion.

Head subacutely raised on each side between the antennæ. Antennæ not widely separated at the base, variable in length, sometimes much longer, sometimes shorter than the body in the ♂; third and fourth joints spined posteriorly at the apex, the third joint longer than the fourth. Prothorax oblong-ovate, as a rule distinctly longer than broad and narrower than the elytra, sometimes subglobose and as wide in the middle as the base of the elytra. Elytra more or less elongate, truncate at the apex. Hind femora generally extending some distance past the apex of the elytra in the ♂. First joint of hind tarsi twice, or nearly twice, as long as the second and third united.

Many of the species included in this genus are narrow and elongated like those of *Rhaphuma*, Pasc. ; others, with subglobose prothorax and relatively shorter elytra, resemble the majority of forms belonging to the genus *Caloclytus*, Fairm. They are distinguished from both the above genera by the presence of spines at the apex of the third, fourth and sometimes also the fifth and sixth antennal joints. In certain species such as those on which the genera *Grammographus* and *Elezira* were founded, the antennal spines are very minute and liable to be overlooked without close examination under the lens ; in the majority they are quite distinct.

The lateral margins of the elytra are in the more typical forms nearly straight, and the metathoracic episterna appear broad and parallel-sided; in others the lateral margins are more or less distinctly sinuate near the middle, and the metathoracic episterna appear narrowed in front and widened out posteriorly.

I. *Lateral margins of elytra nearly straight ; episterna of metathorax parallel-sided.*

A. *Antennal spines minute.* (Subgenus GRAMMOGRAPHUS.)

335. **Demonax lineatus**, *Chevr.* (Grammographus) *Mém. Soc. R. Sci. de Liége,* xviii, p. 286 (1863).

Elongate; densely covered above with buff-yellow pubescence ; prothorax narrowly bordered with yellowish-white pubescence at the base, marked with a narrow, asperate, slightly raised, black band along the middle and a small, pubescent, black spot at each side in front of the middle; each elytron with (1) a short dorsal dark brown vitta near the base, united transversely just behind the scutellum with the corresponding band of the other elytron; (2) a narrow, dark brown band that runs straight back from the shoulder to the apical fourth; (3) an oblique band that extends from the suture at about one-third from the base and ends in a small spot placed close to the hinder end of the lateral band; (4) a V-shaped spot placed a little behind the end of the preceding two bands ; the epipleure and lateral edge also dark brown ; body beneath covered with yellowish-white pubescence. Head marked in front with three black lines, the median one impressed, the lateral ones slightly raised. Antennæ ferruginous, slightly longer than the body in ♂ ; third and fourth joints very

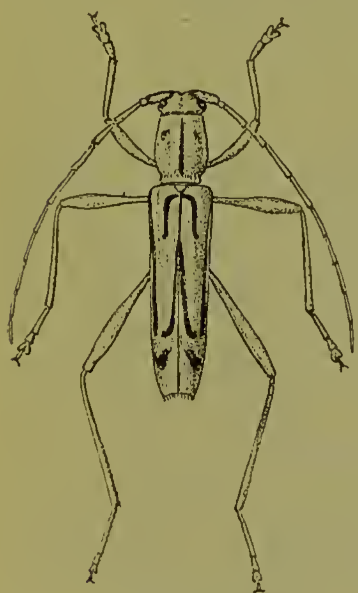


Fig. 94.
Demonax lineatus, Chevr.

feebly spined posteriorly at the apex. Prothorax oblong-ovate, widest behind the middle, narrowed at base. Legs reddish brown, faintly covered with grey pubescence; hind femora extend by nearly one-third of their length past the apex of the elytra.

Length 16; *breadth* 3½ mm.

Hab. India.

336. **Demonax balyi**, *Pascoe* (Clytus), *Trans. Ent. Soc.* (2) v, p. 27 (1859); *id.* (Elezira) *Trans. Ent. Soc.* (3) iii, p. 637 (1869).

Reddish testaceous above; elytra clothed with yellowish-tawny pubescence, marked each with three tomentose black spots—one at the middle, one midway between the middle and the apex, the third and largest also between the middle and the apex, but placed a little nearer to the apex. Body beneath, with the exception sometimes of the prosternum, black; marked with spots and bands of white pubescence. Antennæ and legs testaceous; the apical part of the hind femora and more or less of the hind tibiæ also dark brown; the middle femora sometimes more or less infuscate towards the apex. Head sparsely clothed with yellowish pubescence. Antennæ longer than the body in the male, a little shorter than the body in the female; joints third and fourth with a very small inconspicuous spine at the hinder apical angle. Prothorax closely granulate-punctate, faintly pubescent, marked with a narrow white band at the base on each side; the disc with three very feeble obtuse ridges, which are slightly nitid and a little more strongly punctate than the rest of the surface.

Length 8–11; *breadth* 2–3 mm.

Hab. Southern India: Nilgiri and Anaimalai Hills.

337. **Demonax monticola**, sp. n.

Testaceous red; head sparsely pubescent; prothorax slightly suffused with dark brown at the sides, covered with tawny pubescence, narrowly bordered with pale yellow at each side of the base. Elytra covered with tawny-yellow pubescence, each marked with three dark brown bands—the first, placed at rather less than a third from the base, runs somewhat transversely from near the outer margin to the middle of the disc and then obliquely forwards towards the suture; the second, placed at the middle, takes a similar course to the first but reaches the suture and extends along it in front; the third crosses straight from the outer margin to the suture at about one-third from the apex; the areas included between these dark brown bands are of a somewhat brighter yellow colour than are the apical and basal parts of the elytra. Body beneath testaceous, faintly pubescent, with denser, yellowish-white spots on the episterna of the meso- and metathorax and at the sides of the first two abdominal segments. Antennæ slightly longer than the body in ♂, third and fourth joints very minutely spined at apex. Prothorax oblong-ovate. Elytra feebly quadridentate at

the apex. The hind femora extend by a fourth of their length past the apex of the elytra in the ♂. First joint of hind tarsi nearly three times as long as the second and third united.

Length 13; *breadth* 3 mm.

Hab. Assam: Patkai Mts. (*Doherty*).

338. **Demonax albosignatus**, sp. n.

Elongate; black; head and prothorax covered with dark grey pubescence; prothorax bordered with white pubescence at the base on each side, marked above with a median, slightly raised, asperate black band. Elytra brownish black, slightly tomentose, marked with narrow bands of whitish pubescence: the first band crosses at the base and, just before reaching the shoulder, turns straight back and extends a short distance along the disc; the second band begins at the suture at a short distance behind the scutellum, diverges slightly from the suture as it passes backwards, and at about one-third from the base crosses the disc transversely, it is sometimes angulately dilated at its outer end, a little in front of which there is a small submarginal white spot; the third band crosses transversely a little in front of the apical third, at the suture it is produced in front as a very narrow band, and is sometimes also produced posteriorly; the apex is rather broadly covered with a band of ashy-grey pubescence, from which a narrow sutural band of whitish pubescence extends in front. Body beneath covered with ashy-grey pubescence, the episterna of the meso- and metathorax and the sides of the abdomen more densely covered with whitish pubescence. Antennæ black, faintly covered with grey pubescence; a little longer than the body in the ♂, shorter in the ♀; third and fourth joints very feebly spined at the apex. Prothorax much longer than broad, slightly rounded at the sides; the disc with a median and two feebler lateral elevations, the surface asperate, especially along the median band. Legs black, rather faintly covered with grey pubescence; the hind femora extend by nearly a third of their length past the apex of the elytra in both sexes; first joint of hind tarsi twice as long as the second and third united.

Length 10–13; *breadth* 2–2¾ mm.

Hab. Burma: Ruby Mines district.

339. **Demonax oblongomaculatus**, sp. n.

Black, densely covered above with grey or yellowish-grey pubescence. Elytra marked each with a somewhat variable number of small oblong black spots; one of these is on the disc, nearer to the suture than to the side, at a very short distance from the base, and is followed by a small sutural spot to which it is sometimes joined, three spots are placed in a transverse row at the middle or a little before it, and three smaller spots form another transverse series at a short distance behind the middle; the

pubescence that covers the somewhat quadrate sutural space between the anterior black spot and its fellow is more distinctly yellow in colour than that on the outer parts of the elytra. Body beneath covered with greenish-yellow pubescence, which is denser and more decidedly yellow at the sides; antennæ and legs black, faintly covered with grey pubescence. Antennæ slightly shorter than the body in the ♂, reach to the apical third of the elytra in the ♀; third and fourth joints slightly thickened and obsoletely spined at the apex. Prothorax oblong-ovate; the disc somewhat depressed along the middle, with a feeble median elevation near the base, raised in the form of an obtuse costa at each side; the sides and the median depressed area of the disc densely punctured. Scutellum broad, obtusely rounded at apex, covered with yellowish pubescence. Elytra truncate at the apex, dentate at the angles. Femora rather thick; the hind pair extend by about a fourth of their length past the apex of the elytra in the ♂, by a little less in the ♀.

Length 13–16; *breadth* 3–4 mm.

Hab. Assam: Shillong, North Khasi Hills; Upper Burma: Ruby Mines (*Doherty*).

340. **Demonax nigromaculatus**, sp. n.

Very like *D. oblongomaculatus*, Gahan, in form and markings, but covered above with yellow pubescence; the prothorax marked with two rounded black spots on the disc behind the middle; the legs and antennæ testaceous; the anterior black spots on the elytra exactly like those of *oblongomaculatus*, but instead of the three at the middle and the three behind the middle there are only two at the middle and two behind, the inner spot in each case oblique or oval, the outer one narrow and elongate; from each shoulder a black or dark brown line extends about a third of the length of the elytron. Antennæ reach to the apical third of the elytra in the ♀; third, fourth and fifth joints with a minute spine at the apex. The hind femora extend a little past the apex of the elytra in the ♀. First joint of hind tarsi twice as long as the second and third united.

Length 14; *breadth* $3\frac{1}{2}$ mm.

Hab. Sikhim: Pedong (*A. Desgodins*), in coll. Oberthür and Brit. Mus.

B. *Antennal spines distinct.*

341. **Demonax literatus**, *Gahan, Ann. Mus. Civ. Genov.* xxxiv, p. 27 pl. 1, fig. 6 (1894).

Elongate; brownish black, densely covered with ochreous-yellow pubescence above, yellow pubescence beneath; prothorax with a narrow, asperate, slightly raised, median black band near the base, two pubescent black spots on the disc and one on each side a little before the middle; each elytron is marked with two

narrow, black or dark brown, oblique bands somewhat in the form of an elongated letter V which extend from near the middle almost up to the base; a transverse band that crosses the suture just behind the scutellum unites the front end of the inner band with the corresponding band on the other elytron; at a short distance behind the middle there is a transverse or crescentic black spot from each end of which a short narrow vitta is directed forwards, the inner one obliquely towards the suture, the outer one along the side; between this transverse spot and the apex there is another black spot, which is obliquely oval in form. Antennæ testaceous, a little longer than the body in the ♂, shorter in the ♀; third, fourth and fifth joints with a short spine at the apex; sixth also spined, but feebly so. Femora more or less brownish, rather densely covered with yellowish-grey pubescence; the tibiæ testaceous, less densely pubescent.

Length 9–11½; *breadth* 2¼ mm.

Hab. Burma: Karenee (*Fea*).

342. **Demonax semiluctuosus**, *White* (Clytus), *Cat. Coleopt. B. M., Longic.* p. 283 (1855).
Rhaphuma præcana, *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 277 (1863).
Clytanthus mouhoti, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 604 (1869).

Black; head and prothorax faintly covered with greyish pubescence, prothorax with a narrow white border on each side at the basal margin, the disc with a nude spot on each side before the middle; scutellum white; elytra deep black, somewhat velvety, marked each with an oblique spot and two bands of white pubescence, the spot placed near the suture at about one-fifth from the base; the first band very narrow, crosses a little obliquely before the middle and is continued forward for some distance along the suture; the second band broader, is placed at about one-fifth from the apex. Body beneath black; the prosternum, mesosternum, an oblique spot on each of the mesothoracic episterna, an elongate spot on each of the metathoracic episterna, an oblique band on each side of the metasternum and the first two abdominal segments more or less completely covered with ashy-white pubescence, the rest less densely covered with dark grey pubescence. Antennæ about equal in length to the body in the ♀, very slightly longer in the ♂; sixth to ninth joints covered with ashy-grey pubescence; third and fourth spined at the apex, the spines short. Prothorax oblong-ovate, nearly as wide in the middle as the base of the elytra, densely rugulose-punctate. Elytra very little more than twice as long as the prothorax, truncate and unarmed at the apex. Middle and front femora glabrous, strongly punctured and asperate posteriorly, pubescent and less strongly punctured in front. Hind femora extend past the apex of the elytra by a fifth or fourth of their length in the ♀, and by nearly a third of their

length in the ♂. First joint of the hind tarsi scarcely longer than the rest united.

Length 9–13; *breadth* 2¼–3 mm.

Hab. Tenasserim; Karenee; Siam; Cochin China; Malay Peninsula.

343. **Demonax dignus**, *Gahan, Ann. Mus. Civ. Genova*, xxxiv, p. 26 (1894).

Head black, sometimes ferruginous, thinly covered with grey pubescence; prothorax ferruginous red, sparsely pubescent, the front margin blackish, the base narrowly bordered with white pubescence. Elytra dark brown, each marked with a transverse spot and two bands of ashy-white pubescence; the spot crosses the disc at about one-fifth from the base; the first band crosses somewhat obliquely at the middle and is continued forwards for some distance along the suture; the second band is placed at about one-fifth from the apex; this band has its posterior border ill-defined, the elytron between it and the apex covered with grey pubescence. Body beneath grey, the prosternum between and just before the coxæ, the mesosternum, the hind border of the metasternum, spots on the episterna and the first two abdominal segments in their greater part white. Antennæ cinereous, about equal in length to the body in the ♀, slightly longer in the ♂: third and fourth joints shortly spined at the apex. Prothorax subcylindrical, about one-third longer than broad; finely asperate or granulated. Elytra about two and a half times as long as the prothorax, very feebly dentate at the outer angles of the truncate apex. Front and middle femora strongly punctured and asperate, especially on their posterior face; hind femora less strongly punctured, extend some distance past the apex of the elytra in both sexes. First joint of hind tarsi slightly longer than the remaining joints united.

Length 11–13; *breadth* 2¼–3 mm.

Hab. Burma: Karenee (*Fea*), Ruby Mines district (*Doherty*).

344. **Demonax leucoscutellatus**, *Hope* (Clytus), *Gray's Zool. Misc.* p. 28 (1831).

Rhaphuma semiscutellata, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 282 (1863).

Head and prothorax testaceous, the head rather densely covered in front with yellow pubescence in the ♂; prothorax marked above with a narrow, elongate, postero-median black spot, the base narrowly bordered with white on each side; scutellum white except at the base. The elytra vary from yellowish to brownish testaceous, blackish near the apex, each marked with a narrow oblique spot and two bands of white pubescence; the spot placed near the suture at about one-fifth from the base; the first band very narrow, slightly oblique, crosses a little behind the middle

the second band broader, transverse, is placed at about one-fifth from the apex. Body beneath blackish, the middle of the pro- and mesosternum, an oblique spot on the mesothoracic episterna, an elongate spot on the episterna of the metathorax and a transverse band at the hind border of the metasternum, covered with white pubescence; in the ♂ the first four abdominal segments are more or less completely covered with dense white pubescence; in the ♀, the first segment is testaceous with a posterior white band on each side, the second black with a slightly broader white band, the last three entirely black with a thin covering of grey pubescence. Antennæ as long as the body in the ♂, slightly shorter in the ♀; testaceous to dark brown in colour; third and fourth joints shortly spined at the apex. Prothorax about one-third longer than broad, subcylindrical, rugulose-punctate. Hind femora extending by a fourth of their length past the apex of the elytra.

Variation. Prothorax with a black spot on each side in addition to the black spot above. Elytra black or dark brown not only at the apex but also on the whole area included between the two white bands.

Length 10–12; *breadth* 2–2½ mm.

Hab. Nepal; Sikhim; Assam: Naga Hills and Patkai Mts. (*Doherty*); Manipur (*Doherty*).

345. **Demonax testaceus**, *Hope* (Clytus), *Gray's Zool. Misc.* p. 28 (1831).

Head and prothorax testaceous, elytra yellowish testaceous; head sparsely covered with yellowish-white pubescence; prothorax with a faint greyish-tawny pubescence interspersed with longish erect hairs; elytra marked each with three very small patches of white pubescence, the first very close to, and the others at, the suture, the rest of the surface thinly covered with rather long tawny pubescence. Eyes very feebly emarginate. Antennæ testaceous, rather closely approximated at the base, longer than the body; third and fourth joints spined at the apex, the spines short; third longer than the fourth, and nearly twice as long as the first, second twice as long as broad. Prothorax one-third longer than broad, subcylindrical, gradually and very slightly narrowed in front, scarcely narrowed towards the base; finely and very densely punctured. Elytra densely punctate, truncate at the apex with the outer angles rounded off. Body beneath black; spots or bands of white pubescence at the sides of the mesothorax and abdomen and on the middle of the prosternum and mesosternum. Legs testaceous, slender; hind femora extending by nearly a third of their length past the apex of the elytra. First joint of hind tarsi about twice as long as the second and third united.

Length 9; *breadth* 2 mm.

Hab. Nepal.

346. **Demonax decens**, sp. n.

Head and prothorax testaceous red; the first covered somewhat sparsely in front and on the vertex with luteous-white pubescence; prothorax very faintly pubescent, but marked on each side above with three small white spots—one at the front margin, one at the middle and the third at the base; elytra testaceous for about a third of their length from the base in the middle and to a greater extent at the sides, the rest black-brown, each elytron marked with a round spot at the base and three bands of ashy-white pubescence; the first band begins a little way behind the scutellum, runs along the suture up to the middle, and thence bends outwards to the middle of the disc; the second band placed behind the first, follows a similar course but extends farther outwards, reaching almost to the lateral margin; the third lies along the apical fifth of the suture and is slightly wider at its posterior end. Antennæ a little longer than the body in the ♂, shorter in the ♀; testaceous in colour; third and fourth joints, and the fifth less strongly, spined at the apex. Prothorax oblong-ovate, as wide in the middle as the base of the elytra; with a feebly raised obtuse median costa on the hinder half of the disc. Breast and abdomen black, banded with white pubescence; the prothorax marked just above the coxa with a white spot which is united by a white line with the basal spot seen from above. Legs testaceous; with the hind femora dark brown towards the apex; first joint of the hind tarsus equal in length to the remaining joints united.

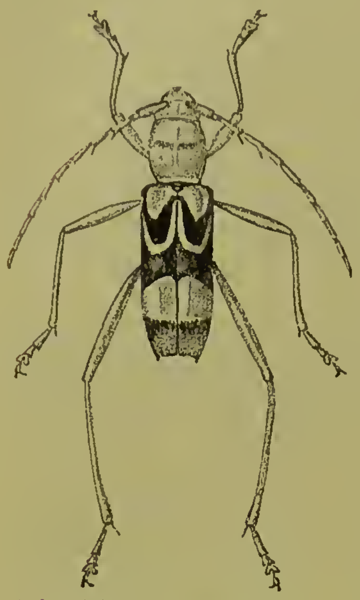


Fig. 95.—*Demonax decens*, Gahan. × $\frac{2}{1}$.

Length 8–12; *breadth* 2–3 mm.

Hab. Southern India: Anaimalai Hills (*H. L. Andrewes*), Nilgiri Hills.

347. **Demonax decorus**, sp. n.

Moderately elongate; deep black, with a tawny-grey pubescence that covers the head and most of the prothorax and a yellowish-grey pubescence formed into bands on the elytra. Prothorax with a narrow transverse black spot on each side of the middle of the disc. Elytra with (1) a triangular dark grey spot on each at the base; (2) a narrow yellowish-grey band that begins at the suture a little behind the scutellum, passes obliquely backwards towards the middle of the disc, which it reaches at about one-fourth of its length from the base, and then is sharply curved round and runs

obliquely forwards to the side; (3) a very broad yellowish-grey band crosses the elytra behind the middle, has its front margin somewhat rounded and its hind margin straight; (4) an ill-defined dark grey band at the apex. Antennæ almost as long as the body in the ♂, about one-fifth shorter than it in the ♀; first four or five joints black, the rest cinereous; third and fourth with a long spine at the apex, fifth as a rule unarmed, but occasionally with a distinct spine at the apex. Prothorax oblong-ovate, as wide in the middle as the base of the elytra. Elytra shortly spined at the outer angles of the truncate apex. Body beneath black; with a dense white pubescence formed into spots on the epimera of the meso- and metathorax, and spread over the whole of the second abdominal segment as well as the postero-lateral parts of the first; the sterna covered less densely with a greyish or white pubescence. Legs black, sparsely setose, faintly pubescent; the femora distinctly but not very thickly punctured; first joint of the hind tarsus slightly longer than the remaining joints united.

Length 10–14; *breadth* $2\frac{1}{2}$–$3\frac{1}{4}$ mm.

Hab. Southern India: Anaimalai Hills (*H. L. Andrewes*).

348. **Demonax reticollis**, *Gahan, Ann. Mus. Civ. Genov.* xxxiv, p. 28, pl. 1, fig. 7 (1894).

Narrow and elongate; black, the head and prothorax covered with greyish pubescence, the prothorax white at the basal margin on each side; scutellum white. Elytra dark brown, somewhat lighter in colour towards the base, marked with bands of ashy-white pubescence; the first band begins at the base close to the scutellum, follows the suture for some distance, then diverges from it and at about one-third from the base runs transversely to the side but does not quite reach the outer margin; the second band is placed transversely a little behind the middle and is slightly prolonged anteriorly at the suture; the third band, also transverse, is placed at the apex. Body beneath grey, the sides of the breast and of the first two abdominal segments whitish. Antennæ covered with grey pubescence, a little shorter than the body in the ♀; third and fourth joints armed each with a rather long slender spine at the apex. Prothorax oblong-ovate, covered above and at the sides with shallow punctures, the interstices very narrow and feebly raised, forming a reticulation.

Length 13 mm.

Hab. Burma: Karenee (*Fea*).

349. **Demonax walkeri**, *Pascoe* (Clytus), *Trans. Ent. Soc.* (2) v, p. 27 (1859).

Black; densely covered above with ashy-grey pubescence; prothorax marked with two round black spots above; elytra marked each with three large black spots that extend from the outer

margin to within a short distance of the suture, the first spot just behind the shoulder, the second in front of the middle, the third between the middle and the apex; the second spot is widened towards the outer margin. Body beneath ashy grey, the episterna of the meso- and metathorax, the hind border of the metasternum, and a postero-lateral transverse spot on each of the first two abdominal segments white. Antennæ ashy grey, about equal in length to the body in the ♀, exceeding it by the last two joints in the ♂; third and fourth joints subequal in length, very distinctly spined at the apex; fifth longer, unarmed. Prothorax ovate-cylindrical. Elytra dentate at the outer angles of the truncate apex. Hind femora extending past the apex of the elytra by nearly a fifth of their length in the ♀ and by more than a third of their length in the ♂; subdentate at the apex. First joint of hind tarsus rather more than twice as long as the next two joints united.

Length 6½–13; *breadth* 1½–3 mm.

Hab. Ceylon.

350. **Demonax andamanicus**, sp. n.

Black; head and prothorax covered with grey pubescence, prothorax with a broad black band across the middle; scutellum white; elytra black, marked with three ashy-grey bands—the first at rather less than one-third from the base, widened or curved forward anteriorly at the suture, the second transverse, placed a little behind the middle, the third at the apex. Body beneath black, faintly covered with dark grey pubescence; prosternum in front of the coxæ, mesosternum between the coxæ, an oblique spot on each of the mesothoracic episterna, a broad band across the hind part of the metathorax and a transverse posterior band on each of the first two abdominal segments white. Head marked above with a few sparse punctures. Antennæ nearly twice as long as the body in the ♂, longer than the body by one or two joints in the ♀; first six joints more or less densely covered with ashy-grey pubescence, the rest dark brown; third to sixth spined at the apex, the spines rather short and slender. Prothorax about one-third longer than broad, widest at the middle, feebly constricted in front; the upper surface asperate along the middle. Elytra somewhat obliquely truncate at the apex, feebly dentate at the outer angles. Hind femora extend by about one-fourth of their length past the apex of the elytra in the ♂, sharply dentate at the apex; middle femora rather strongly asperate at the sides in the distal half, sharply dentate at the apex, the front femora asperate posteriorly near the apex. First joint of the hind tarsi more than twice as long as the next two united.

Length 11–18; *breadth* 2½–4 mm.

Hab. Andaman and Nicobar Islands.

351. **Demonax macilentus**, *Chevr.* (Macrocyrta) *Rev. et Mag. de Zool.* 1858, p. 82; *id. Thomson's Archiv Ent.* i, p. 417 (1858); *id.* (Acrocyrta) *Mém. Soc. R. Sci. de Liége*, xviii, p. 260 (1863); *Pascoe* (Demonax), *Trans. Ent. Soc.* (3) iii, p. 623 (1869).

Head, prothorax, body beneath, legs and first five joints of antennæ covered with ashy-grey pubescence; prothorax with two widely separated black spots above. Elytra black or dark brown, with five bands of ashy-grey pubescence; the first band basal, not very distinct; the second, placed obliquely outwards and backwards, proceeds from a little behind the scutellum and is then bent round and directed towards the shoulder; the third crosses transversely just before the middle and is produced anteriorly for some distance along the suture; the fourth, a rather broad band, is placed between the middle and the apex, its front margin somewhat rounded; the fifth band at the apex. Head sparsely punctured above behind the antennæ and eyes. Antennæ a little longer than the body in the ♀, exceeding it in length by the last two or three joints in the ♂; third and fourth joints spined at the apex, the spine rather short but distinct, fourth shorter than the third or fifth. Prothorax nearly one-third longer than broad, feebly rounded at the sides, widest just behind the middle, furnished with a somewhat obtuse median carina on the posterior half of the disc. Elytra somewhat obliquely truncate at the apex, the outer angles feebly dentate. Hind femora extend past the apex of the elytra slightly in the ♀, by nearly a third of their length in the ♂, and are distinctly dentate at the apex. First joint of hind tarsi about twice as long as the next two joints united.

Variation. In Burmese examples the elytral bands are ashy white, the second band does not begin at the suture as in the type but at a very short distance from it; the pubescence that covers the body beneath is whitish on the prosternum, between and in front of the coxæ on the mesosternum, the episterna and the sides of the first three abdominal segments.

Length 14–19; *breadth* 3–4 mm.

Hab. Burma: Karenee (*Fea*); Malay Peninsula: Penang, Singapore.

352. **Demonax dohertii**, sp. n.

Black, densely covered with yellowish-grey pubescence; elytra mouse-grey, marked each with an oblique spot and two bands of black velvety pubescence, the spot placed on the disc at about one-fourth from the base; the first band, placed wholly in front of the middle, is strongly oblique, extends from the suture to the side and is there somewhat widened; the second band broader, very slightly oblique, rounded at end, is placed at a little more than one-fourth from the apex and does not quite attain to the suture or to the outer margin. Antennæ of ♀ extend to middle of elytra;

fourth joint strongly spined at the apex, the third less strongly spined. Prothorax oblong-ovate. Elytra three times as long as broad, transversely truncate at the apex, the outer angles dentate. Hind femora reach to the apex of the elytra in the ♀. First joint of hind tarsi twice as long as the second and third united.

Length 13; *breadth* $2\frac{1}{2}$ mm.

Hab. Manipur (*Doherty*).

353. **Demonax mulio**, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 635 (1869).

Black; head and prothorax densely covered with grey pubescence, the prothorax with two more or less widely separated nude black spots above. Elytra black or dark brown, somewhat velvety, broadly banded with ashy-grey or yellowish-grey pubescence; the first grey band basal, curved and continued backwards some distance on each side of the disc; the second band narrowly triangular with its apex almost touching the scutellum, its base continued on each side as a short transverse band from which an anterior branch is given off; the third is a broad band placed for the greater part behind the middle with its front margin more or less rounded; the fourth a broad apical band. Body beneath covered with pubescence chiefly of a grey colour, but more or less whitish on the middle of the prosternum and mesosternum, on the episterna of the meso- and metathorax and on the second abdominal segment. Antennæ shorter than the body in both sexes; third and fourth joints strongly spined at the apex, the fifth with a very feeble spine. Prothorax broadly ovate or subglobular, as wide in the middle as the base of the elytra, reticulate-punctate. Elytra about two and a half times as long as the prothorax, dentate at the outer angles of the apex. Hind femora extended by a fourth of their length past the apex of the elytra in the ♀. First joint of the hind tarsi about twice as long as the next two joints united.

Length 8–12; *breadth* 2–3 mm.

Hab. Assam Valley and Patkai Mts. (*Doherty*); Malay Peninsula; Borneo.

354. **Demonax quadricolor**, *Gahan, Ann. Mus. Civ. Genov.* xxxiv, p. 101 (1894).

Head, antennæ, prothorax, body beneath and legs covered with ashy-grey pubescence, the episterna of the meso- and metathorax densely covered with whitish pubescence. Elytra marked with differently coloured bands of pubescence; the first band, placed at the base, is ashy grey and encloses an obliquely elongated black spot; the second band is black, narrow and strongly oblique; the third greyish tawny, somewhat triangular in form, placed just behind the middle; the fourth transverse, tawny brown in colour; the fifth is a rather broad, transverse, apical band of a greyish-tawny colour like the second. The antennæ do not extend beyond

the middle of the elytra in the ♀; third and fourth joints armed each with a very short spine at the apex.

Length $10\frac{1}{2}$ mm.

Hab. Tenasserim: Mt. Mooleyit (*Fea*).

355. **Demonax fryanus**, sp. n.

Black; head, prothorax, antennæ and legs covered with ashy-grey pubescence. Elytra brownish black, tomentose, banded with ashy-grey pubescence; the first band placed at the base, slightly widened and curved back just within the shoulder; the second, which is very narrow, begins at the suture just behind the scutellum, diverges from the suture and at about one-fourth from the base is bent round so as to run a little obliquely to the side; the third is a rather broad transverse band placed behind the middle and widened anteriorly at the suture; the fourth is an apical transverse band. Body beneath ashy grey, the episterna of the meso- and metathorax and the first two abdominal segments whitish, last three segments of abdomen blackish. Antennæ three-fourths of the length of the body in the ♀; third and fourth joints spined at the apex, the spine on the third short, that on the fourth longer and more distinct. Prothorax subglobose, as wide in the middle as the base of the elytra, rather densely punctate, the interstices frequently formed into fine reticulations. Elytra broadly truncate at the apex, very feebly denticulate at the outer angles. Hind legs long, slender; the femora extend by a third of their length past the apex of the elytra; the first joint of the tarsi three times as long as the second and third united.

Length 7–9; *breadth* $1\frac{3}{4}$–$2\frac{1}{2}$ mm.

Hab. Burma: Ruby Mines district (*Doherty*).

This species somewhat closely resembles the Chinese *D. bowringi*, Pasc., in the markings of the elytra.

356. **Demonax quadricollis**, sp. n.

Black, covered with yellowish-grey or greenish-grey pubescence; prothorax with a small black spot on the disc just behind the middle. Elytra dull brownish black, banded with yellowish-grey pubescence; the first band crosses the base and is curved backwards just inside the shoulders; the second extends from the basal band along the suture, diverges a little from the suture posteriorly, and then is bent so as to run transversely or a little obliquely forwards to the outer margin; the third band is transverse, triangularly dilated in front at the suture and placed wholly behind the middle; the fourth at the apex, elongated at the suture in form of a triangle, the apex of which touches the band in front. Body beneath yellowish grey, the episterna of the mesothorax and metathorax and the sides of the abdominal segments luteous white. Antennæ equal in length to the body in ♂, shorter in ♀; third

and fourth joints spined at the apex. Prothorax scarcely longer than broad, almost parallel-sided in the anterior seven-eighths of its length, narrowed at the base, the surface reticulate-punctate. Elytra less than three times as long as broad, transversely truncate at apex. Legs slender; hind femora extend by about one-fourth of their length past the apex of the elytra in the ♂, by one-fifth in the ♀. First joint of hind tarsi more than twice as long as the second and third united.

Length $6\frac{1}{2}$–7; *breadth* $1\frac{1}{2}$ mm.

Hab. Burma: Karen Mts. (*Doherty*).

II. *Lateral margins of elytra more or less distinctly sinuate in the middle; episterna of metathorax appear narrowed in front.*

A. *Antennal spines very short.*

357. **Demonax bicinctus**, *Hope* (Clytus), *Gray's Zool. Misc.* p. 28 (1831).

Head black, thickly covered with ashy-grey pubescence; prothorax ferruginous red, narrowly bordered with white at the base on each side; scutellum black; base of elytra testaceous-yellow, the rest dark brown, marked with three bands of ashy-white pubescence—the first band begins at the suture a little behind the scutellum, runs obliquely backwards and outwards to the side and is there slightly bent forwards; the second band crosses transversely a little behind the middle, is gradually widened towards and a little produced in front at the suture; the third band is placed at the apex; breast and abdomen black; the episterna of the meso- and metathorax, the hind border of the metasternum, and a posterior band on each of the first two abdominal segments white. Antennæ about as long as the body in the ♂, shorter in the ♀; third and fourth joints obsoletely spined at the apex. Prothorax subglobose, scarcely longer than its width across the middle, densely rugulose-punctate. Sides of the elytra extend downwards near the base, the metathoracic episterna appear very narrow in front and wider behind. Hind femora extend well beyond the apex of the elytra. First joint of hind tarsi slightly longer than the remaining joints united.

Length 11–12; *breadth* 3 mm.

Hab. Nepal.

358. **Demonax dimidiatus**, *Chevr.* (Rhaphuma) *Mém. Soc. R. Sci. de Liége*, xviii, p. 279 (1863).

Black, rather closely covered with short dark grey pubescence; elytra marked each with a paler, elongate, ashy-grey spot, surrounded by some glabrous black patches near the base, with a lateral pubescent black spot at about one-fourth from the apex. Body beneath dark grey, the episterna of the mesothorax, the sides of the metathorax and first three abdominal segments ashy

white. Antennæ reach to the apical third or fourth of the elytra in the ♀; its third and fourth joints feebly spined at the apex. Prothorax oblong-ovate, nearly one-third longer than broad, finely and very densely granulate-punctate. Elytra transversely truncate at the apex, scarcely dentate at the outer angles. Episterna of metathorax strongly overlapped in front by the sides of the elytra. The hind femora extend by nearly a third of their length past the apex of the elytra. First joint of hind tarsi about twice as long as the second and third united.

Variation. The posterior black spot on each elytron is sometimes very small and occasionally disappears; the black area at the base is sometimes limited to a band surrounding the pale grey spot or even to two lines at the side of it united by an oblique line posteriorly. The sides of the abdomen along their whole length and the metasternum, except in the middle, are sometimes white.

Length 8–10; *breadth* 2–2½ mm.

Hab. Southern India: Nilgiri Hills (*H. L. Andrewes*).

359. **Demonax albomaculatus**, *Allard* (Clytus), *Le Naturaliste,* (2) viii, p. 162 (1894).

Black, rather closely covered with short lead-grey pubescence; elytra with three small oval spots of white pubescence—one on the disc of each at somewhat less than a third of its length from the base; the third spot sutural, placed at a short distance behind the scutellum. Body beneath grey, the episterna of the meso- and metathorax and four spots along each side of the abdomen white. Antennæ extend to the apical fourth of the elytra in the ♀, to the apex in the ♂; third and fourth joints feebly spined at the apex, third subequal in length to the fifth, distinctly longer than the fourth, second subcylindrical, one-third longer than broad. Prothorax oblong-ovate, very densely and very finely punctate. The hind femora extend by about a fifth of their length past the apex of the elytra in the ♂. First joint of hind tarsi less than twice as long as the second and third united. Episterna of metathorax strongly overlapped in front by the sides of the elytra.

Variation. In some examples that differ in no other respect from the typical form the white spots of the elytra are wanting and the whole of the upperside presents a uniform lead-grey colour.

Length 9–11; *breadth* 2–2½ mm.

Hab. Southern India: Madura, Kodaikanal Mts. (*J. Castets*).

B. *Antennal spines distinct.*

360. **Demonax divisus**, *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 271 (1863).

Black, rather densely covered with ashy-grey pubescence; scutellum blackish; elytra black, marked with three pubescent white

spots and two very broad transverse ashy-white bands—one submedian, the other apical, the base narrowly covered with darker grey pubescence; one of the three white spots is at the suture just behind the scutellum, the others are placed one on the disc of each elytron a little in front of the submedian band. Body beneath ashy grey, the meso- and metathorax whitish at the sides, a large white spot at each side of the first and second abdominal segments. Antennæ, which extend a little past the middle of the elytra, ashy grey; third and fourth joints spined at the apex, the fifth also, but very feebly. Episterna of metathorax strongly overlapped in front by the sides of the elytra.

Length 11; *breadth* $2\frac{3}{4}$ mm.

Hab. Southern India: Nilgiri Hills.

361. **Demonax albicinctus**, *Hope* (Clytus), *Gray's Zool. Misc.* p. 28 (1831).

Clytus filiformis, *Lap. et Gory, Hist. Nat. et Iconogr. des Ins. Coléopt.* (*Mon. du genre* Clytus), p. 95, pl. 18, fig. 112 (1841).

Black; the elytra marked with three ashy-white bands; the first band, which is very narrow and whiter than the other two, begins at the suture a little behind the scutellum, runs obliquely backwards a short distance and then curves out to the edge of the disc; the second crosses straight from the suture to the outer margin a little behind the middle; the third is placed transversely at the apex. Body beneath black, faintly covered with grey pubescence, with spots of white pubescence on each side of the mesothorax, metathorax and first abdominal segment. Antennæ scarcely reach past the middle of the elytra in the ♀, a little longer in the ♂: third, fourth and fifth joints spined at the apex, the spine on the fourth distinct, that on the fifth minute. Prothorax oblong-ovate, nearly as wide in the middle as the base of the elytra, densely reticulate-punctate. Hind femora extend well beyond the apex of the elytra in both sexes. First joint of hind tarsi twice as long as the second and third united. Episterna of metathorax almost entirely overlapped in front by the sides of the elytra.

Length 7–9; *breadth* $1\frac{1}{2}$–2 mm.

Hab. Nepal.

362. **Demonax ascendens**, *Pascoe* (Clytus), *Trans. Ent. Soc.* (2) v, p. 27 (1859).

Rhaphuma geniculata, *Chevr. Mém. Soc. R. Sci. Liége,* xviii, p. 280 (1863).

Black; head and prothorax very faintly veiled with bluish-grey pubescence, the prothorax with a median black spot above; elytra marked each with three ashy-grey bands and a very narrow white one; the latter begins at the suture a little behind the scutellum, diverges slightly from the suture as it passes backwards, and at rather more than one-third from the base curves outwards to the

lateral part of the disc; one of the grey bands is at the base and is somewhat indistinct, another at or just before the middle, approaches closely to the hind part of the white band, the third is at the apex. Body beneath black, with white bands on the episterna of the meso- and metathorax and on the first abdominal segment. The antennæ do not reach past the middle of elytra in the ♀; brownish black, the first two joints testaceous, second nearly twice as long as broad; third, fourth and fifth spined at the apex, the spines very small. Prothorax subglobose, densely punctulate.

Length $6\frac{1}{2}$–8; *breadth* $1\frac{1}{2}$–2 mm.

Hab. India: North-West Provinces, Saharanpur (*E. P. Stebbing*); Ceylon.

363. **Demonax formicoides**, *Lameere* (Clytus), *C. R. Soc. Ent. Belg.* 1890, p. ccxii.

Black; the head sparsely covered with yellow pubescence in front; prothorax glabrous, glossy; elytra dull black, faintly tomentose, marked with three elongate spots and a transverse median band of pale yellow pubescence, the apex broadly covered with ashy-grey pubescence; one of the spots placed on the suture a little behind the scutellum, the other two farther back, placed obliquely one on the disc of each elytron. Body beneath black, the postero-lateral borders of the metasternum, the episterna of the metathorax, a spot on each of the mesothoracic episterna and a large spot at each side of the first abdominal segment covered with dense white pubescence; front femora entirely, the middle and hind femora at the base, ferruginous red. The antennæ extend a little past the middle of the elytra; first two joints and the bases of the next three or four ferruginous, the rest dark brown; third, fourth and fifth spined at the apex, the spine on the fifth minute, that on the third and fourth quite distinct. Prothorax rounded at the sides, narrowed at base, its surface asperate. Episterna of metathorax overlapped in front by the sides of the elytra. The hind femora extend well beyond the apex of the elytra.

Length $7\frac{1}{2}$–8; *breadth* 2 mm.

Hab. Chutia Nagpur: Kunbir and Nowatoli.

364. **Demonax maculicollis**, sp. n.

Black; head covered faintly in front with grey pubescence; prothorax glabrous, subnitid, marked with a small median spot of yellow pubescence a little in front of the base; elytra marked with three spots of yellow pubescence in front, a transverse band of yellow pubescence just behind the middle, and another similar band at the apex which is partly yellow, partly ashy grey. Body beneath black; a large transverse spot on the prosternum, a spot on each of the meso- and metathoracic episterna, the postero-lateral angles of the metasternum and a large spot on each side of the

first abdominal segment yellow. Antennæ reach to the apical third of the elytra; first joint ferruginous, the rest blackish with a faint covering of grey pubescence; third, fourth and fifth spined at the apex; second joint cylindrical, twice as long as broad: third much longer than the fourth or fifth. Prothorax rounded at sides, narrowed at base, the surface subasperate or rugulose. Episterna of metathorax wholly or very nearly covered in front by the sides of the elytra. Legs black, faintly pubescent, sparsely furnished with long setæ.

Length 9; *breadth* 2 mm.

Hab. Southern India: North Canara (*T. R. D. Bell*).

This species is closely allied to *D. formicoides*, Lam., and resembles it much in markings; the anterior sutural spot of the elytra is only slightly oblong, the discal spots are obliquely oval.

365. **Demonax delesserti**, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 273 (1863).

Black, with a faint covering of ashy-grey pubescence; prothorax ashy grey for nearly a third of its length from the base, the rest black, subnitid; scutellum whitish; elytra dull black, each with a short, oblique, anterior band and a transverse median band of yellowish pubescence, also an apical band of ashy-grey pubescence; the anterior band extends from the middle of the disc and reaches the suture a little behind the scutellum; the median band is somewhat broader in the middle, narrowed towards each side. Body beneath faintly ashy grey; the episterna of the mesothorax, the hind border of the metathorax, and a broad band, interrupted in the middle, on the first abdominal segment pale yellow; front legs wholly, the middle and hind ones at the base only, ferruginous. Antennæ black, a little longer than half the body; third, fourth and fifth joints spined at the apex, third joint much longer than the fourth. Prothorax oblong-ovate, narrowed and depressed at the base, the surface asperate.

Length 8; *breadth* 3 mm.

Hab. Southern India: Pondicherry.

This species, which I have not seen, is evidently very closely allied to *D. formicoides*, Lam., and *D. maculicollis*, Gahan.

366. **Demonax persimilis**, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 275 (1863).

Black; prothorax narrowly bordered with white pubescence at the base; elytra dull black, faintly tomentose, marked with three bands of ashy-white pubescence—a Λ-shaped band in front with its apex at the suture a little behind the scutellum, a transverse band at the middle and another at the apex. Body beneath black, with the metathoracic episterna, a spot on each of the mesothoracic episterna, the hind border of the metasternum, and a

lateral transverse spot on each of the first two abdominal segments white. Antennæ extend past the middle of the elytra; first two joints ferruginous, the rest dark brown, faintly covered with grey pubescence; third, fourth and fifth distinctly spined at the apex, the spine on the fourth longest. Prothorax rounded at the sides, narrowed at base, its surface reticulate-punctate. Episterna of metathorax overlapped in front by the sides of the elytra.

Length 6–7; *breadth* 2 mm.

Hab. Southern India: Nilgiri Hills.

This species is allied to *D. formicoides*, Lameere; it resembles it in form and to a considerable extent also in its markings, but the bands of the elytra are all ashy-white in colour, and instead of three spots in front there are two oblique, very slightly curved bands which meet at the suture; occasionally, however, these bands are slightly interrupted, appearing then as three spots.

367. **Demonax funebris**, *Lameere* (Clytus), *C. R. Soc. Ent. Belg.* 1890, p. ccxii.

"Elongate, black; the antennæ black, fourth joint spined, the sides of the thorax evenly rounded; elytra nitid, lightly coriaceous; a solitary small spot behind the scutellum, a rounded discoidal spot before the middle, an oblique fascia after the middle and the apices white, the breast and sides of the abdomen beneath with white spots."

"*Length* 9 mm.

"*Hab.* Hindostan." (*Lameere.*)

Genus PSILOMERUS.

Psilomerus, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 257 (1863); *Lacord. Gen. Coléopt.* ix, p. 70 (1869).

Type, *P. angustus*, Chevr.

Range. Southern India, Malay Peninsula and Philippine Islands.

Narrow and elongate in form. Head with a feeble elevation on each side between the antennæ; face subvertical, rectangular, longer than broad; eyes rather small, feebly emarginate. Antennæ slender, filiform, a little longer than the body in the ♂, shorter in the ♀; third joint not longer than the fourth, as a rule much shorter, armed with a long slender spine at the apex, the spine cylindrical, not widened at the base, sometimes thickened at the extremity; fourth and following joints unarmed. Prothorax longer than broad, subcylindrical, nearly as wide at the base as in the middle, slightly narrowed in front. Elytra a little broader than the prothorax, more or less parallel-sided, truncate at the apex, the lateral margins nearly straight. Legs long, slender; femora gradually thickened from near the middle, the hind pair extended some distance beyond the apex of the elytra; first joint of hind tarsi longer than the rest united.

This genus resembles *Demonax*, Thoms., but is somewhat narrower in form, and distinguishable from it by the relatively short third antennal joint, and the peculiar form of the spine with which this joint is armed at the apex.

368. **Psilomerus angustus**, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 257 (1863).

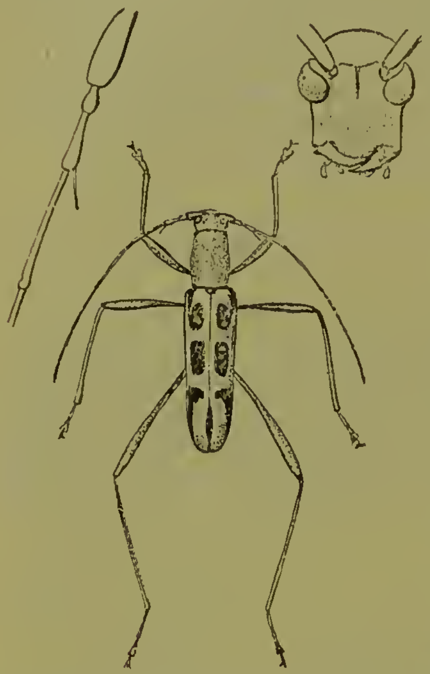


Fig. 96.
Psilomerus angustus, Chevr. × $\frac{2}{1}$.

Head and prothorax ferruginous red, with a thin covering of luteous-grey pubescence; elytra densely covered with yellow pubescence, marked each with three large dark brown spots, the first two oblong, placed on the disc, one near the base, the other at the middle; the third begins as a transverse spot on the disc at about one-third from the apex, and is continued backwards along the side almost up to the apex. Body beneath dark brown, with dense white pubescence that forms a spot on each of the mesothoracic episterna, a band along the metathoracic episterna, and a large spot at the side of each abdominal segment; antennæ and legs dark brown, somewhat reddish towards the base. Head and prothorax finely and very densely punctulate. Third antennal joint about half the length of the fourth, its long slender apical spine slightly thickened at the extreme end. Hind femora extend by a third of their length past the apex of the elytra in the ♂.

Length $5\frac{1}{2}$–8; *breadth* 1–$1\frac{3}{4}$ mm.

Hab. Southern India: Nilgiri Hills.

369. **Psilomerus bimaculatus**, sp. n.

Head and prothorax ferruginous red, faintly covered with tawny pubescence; elytra brown, somewhat densely covered with rather long, closely-laid tawny pubescence, each marked with a dorso-lateral round black spot at about one-fourth of its length from the apex; body beneath brownish black, the episterna of the meso- and metathorax and the sides of the abdomen covered with ashy-white pubescence; antennæ and legs ferruginous, the thickened part of the femora dark brown. Head and prothorax densely and finely, the elytra more strongly punctured. Third antennal joint a little more than half the length of the fourth.

Hind femora extending by nearly a third of their length past the apex of the elytra.

Variation. Elytra sometimes devoid of the posterior black spot. This condition has been met with in only one specimen, the largest, out of four which I have seen. In this specimen also the antennæ, elytra and legs are darker; the first antennal joint only is ferruginous, the rest dark brown.

Length 5½–9; *breadth* 1–2 mm.

Hab. Southern India: Nilgiri Hills (*Sir G. Hampson & H. L. Andrewes*).

370. **Psilomerus hampsoni**, n. sp.

Head, prothorax and greater part of the elytra testaceous; head covered in front with ashy-white pubescence; prothorax with a border of ashy-white pubescence at the base, along the lower part of each side, and the lateral part of the front margin; elytra marked each with two spots and two oblique bands of ashy-white pubescence; the spots discal, one at the base, the other at rather less than one-third from the base; the bands placed one at about one-third, the other at one-sixth from the apex, both extend from the outer margin to the suture—the first produced anteriorly as a narrow band along the suture, the second a little widened at the suture; the elytra dark brown between the bands and also from the posterior band up to the apex. Body beneath dark brown, entirely or nearly covered with dense ashy-white pubescence; antennæ and legs testaceous, the clavate portion of the hind femora brown. Head and prothorax densely and finely, the elytra more strongly punctured. Third antennal joint subequal in length to the fourth. Hind femora extend by nearly a third of their length past the apex of the elytra in the ♂.

Length 6–7; *breadth* 1½ mm.

Hab. Southern India: Nilgiri Hills (*Sir G. Hampson & H. L. Andrewes*).

Genus OLIGOENOPLUS.

Oligoenoplus, *Chevr. Mém. Soc. R. Sci. de Liége*, xvii, p. 337 (1863).

Type, *O. ventralis*, Chevr.

Range. Southern India.

Head slightly raised on each side between the antennæ; front vertical, subquadrate. Antennæ somewhat distant at base, as long or nearly as long as the body in the ♂, a little shorter than the body in the ♀; third and fourth joints spined at the apex, the spines sometimes almost obsolete; third joint much longer than the fourth. Prothorax not longer than broad, narrowed at base, very slightly narrowed in front. Elytra feebly sloped behind, either truncate or somewhat rounded at the apex, each with a feeble, obtuse, dorsal elevation at the base; the shoulders some-

what prominent, not carinate. Legs moderately long, the femora gradually subclavate, the hind pair not extended past the apex of the elytra in the ♂; first joint of hind tarsi scarcely longer than the second and third united. Episterna of metathorax narrow, parallel-sided.

371. **Oligoenoplus ventralis**, *Chevr. Mém. Soc. R. Sci. de Liège*, xviii, p. 337 (1863).

Variable in colour and markings, sometimes nearly black all over, sometimes with the head, pronotum, elytra, legs and antennæ of a more or less reddish-testaceous colour, rather densely covered above with pubescence, which is sometimes grey, sometimes tawny yellow in colour; prothorax with a glabrous black or red spot or band in the middle; elytra marked each with a brownish or black spot near the base, an oblique band a little in front of and another just behind the middle; these bands are united along the suture and together with the corresponding bands of the other elytron form a somewhat X-shaped figure; another black or brown spot placed about midway between the postmedian band and the apex; body beneath black, more or less densely covered with luteous-yellow pubescence. Antennæ reach to the apical third of the elytra in the ♀, nearly to the apex in the ♂; third joint more or less distinctly, the fourth obsoletely, spined at the apex. Prothorax strongly convex above, rather strongly and densely punctured, the punctures more distinctly visible on the glabrous dorsal band. Elytra narrowly rounded or sometimes obliquely subtruncate at the apex. Hind femora not extended quite to the apex of the elytra in the ♂; first joint of hind tarsus not longer than the second and third united.

Fig. 97.—*Oligoenoplus ventralis*, Chevr. × $\frac{4}{1}$.

Length 7–11; *breadth* 2–2$\frac{3}{4}$ mm.

Hab. Southern India: Nilgiri Hills.

372. **Oligoenoplus murinus**, *Allard* (Clytus), *Le Naturaliste* (2) viii, p. 162 (1894).

Black, densely covered above with yellowish-grey pubescence; elytra marked with a velvety black sutural band of variable dimensions; when most fully developed this band extends from the base to the apical fourth, is moderately broad, and angulately dilated at intervals so as to form about four somewhat lozenge-shaped spots; in some cases it is narrow, with only one or two small spots, in others it is reduced to a thin sutural line,

and occasionally disappears altogether. Body beneath black, more or less densely covered with yellow pubescence; legs and antennæ black, thinly covered with grey pubescence. The antennæ reach to the apical fourth of the elytra in the ♀, to the apex or slightly beyond it in the ♂; third joint with a short spine at the apex, the fourth also but less distinctly spined. Elytra truncate at the apex, dentate at the outer angles. The hind femora reach almost to the apex of the elytra in the ♀, quite to the apex in the ♂. First joint of hind tarsus a little longer than the second and third united.

Length 8–10; *breadth* 2–2½ mm.

Hab. Southern India: Madura and Kodaikanel Mts.

Genus AGLAOPHIS.

Aglaophis, *Thoms. Archiv. Ent.* i, p. 315 (1857); *Lacord. Gen. Coléopt.* ix, p. 86 (1869).

Epodus, *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 335 (1863); *Lacord. l. c.* p. 85.

Type, *A. fasciata*, Thoms.

Range. Northern India, Burma and Java.

Resembles *Oligoenoplus*, Chevr., in the form and structure of the head and prothorax. Antennæ longer than the body in the ♂, shorter in the ♀; third and fourth joints either unarmed or obsoletely spined at the apex. Elytra subvertically deflexed at the sides, strongly sloped posteriorly; the shoulders prominent, carinate; the apices truncate, strongly spined at the outer angle; the epipleures slightly widened posteriorly, with the upper edge sharp and prominent; each elytron with a short dorsal crest or tubercle near the base. Episterna of metathorax narrow, parallel-sided. Hind femora shorter than the abdomen. First joint of hind tarsi scarcely longer or not longer than the second and third united.

This genus is very closely allied to the Palæarctic genus *Anaglyptus*, Muls.

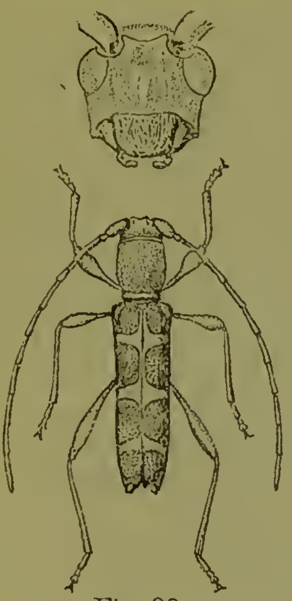


Fig. 98. *Aglaophis humerosus*, Chevr. × $\frac{2}{1}$.

373. **Aglaophis humerosus**, *Chevr.* (Epodus) *Mém. Soc. R. Sci. Liége,* xviii, p. 336 (1863).

Black; head and prothorax covered with grey pubescence, the prothorax with a white border at the base; scutellum white; elytra black and subnitid, with the sutural border from the base to the middle and three transverse bands covered with white pubescence—one band at less than one-fourth from the base, the second at the middle, and the third at less than one-fourth from the apex; the

first two bands testaceous in part beneath the pubescence. Breast for the most part covered with white pubescence; abdomen black and glossy, with a white band on the second segment and a white spot at each side of the first. Legs and antennæ black, sparsely ciliate and faintly pubescent.

Length 10; *breadth* 2½ mm.

Hab. India.

374. **Aglaophis fasciata,** *Thoms. Archiv. Ent.* i, p. 316 (1857).

Reddish brown to dark brown, densely covered with greyish-tawny pubescence; elytra marked with dark brown spots—one near the base; two, placed obliquely near the middle, are united at the suture, and with the corresponding spots of the other elytron form a somewhat X-shaped pattern; a fourth spot, with rounded front margin and oblique or sinuate hind margin, is placed transversely at about one-fourth from the apex; between it and the apex there is a much smaller spot. Antennæ nearly one-third longer than the body in the ♂. Prothorax with a rather strong dorso-lateral tubercle on each side, strongly narrowed at the base, very slightly so in front. Elytra transversely truncate at the apex, the sutural angles acute, the outer angles somewhat strongly spined.

Length 10½–14; *breadth* 3–4½ mm.

Hab. Sikhim.

375. **Aglaophis watsoni,** sp. n.

Dark brown, the head and the body beneath covered with greyish-tawny pubescence; prothorax dark brown interspersed with greyish-tawny pubescence; elytra with narrow bands of yellowish-tawny pubescence alternating with broader dark brown bands; the basal crest on each elytron surrounded by an oblong dark brown spot; the first dark brown band runs obliquely backwards from the suture to the side, and is there somewhat angulately dilated; the second is a broader transverse band placed for most of its extent behind the middle; the third dark brown band is obliquely transverse; the fourth, much narrower, placed at the apex. Antennæ reach to the apical fourth of the elytra in the ♀ and are dark brown covered in part, especially at the base of each joint, with grey pubescence. Prothorax rounded at the sides, the disc with a postmedian cariniform tubercle. Elytra strongly spined at the outer apical angles. Legs reddish brown, the clavate portion of the femora dark brown; the hind femora not extended past the third abdominal segment in the ♀; first joint of the hind tarsi a little longer than the second and third united.

Length 13; *breadth* 3½ mm.

Hab. Upper Burma: North Chin Hills (*Capt. E. Y. Watson*).

Group *EPIPEDOCERINI.*

Eyes small, finely facetted, usually almost entire. Prothorax more or less constricted at the base. Front coxæ rounded, their acetabula almost or quite closed in behind. Acetabula of middle coxæ shut off from the epimera. Episterna of metathorax narrow. Femora clavate. Tarsi rather short, the first joint shorter as a rule than the next two joints united; claws short, not widely divergent.

Synopsis of Genera.

A. Antennæ not closely approximated at base; tarsal claws divergent.
  a. Prothorax broadly emarginate at base.
    a'. Mesonotum without stridulatory area.
      *a*². Prothorax very little or not longer than broad; elytra not carinate. EPIPEDOCERA, p. 305.
      *b*². Prothorax distinctly longer than broad; elytra with short carina on each side .... BICON, p. 310.
    b'. Mesonotum with stridulatory area; elytra carinate along each side .. CENTROTOCLYTUS, p. 308.
  b. Prothorax with basal margin straight and entire .... HALME, p. 311.
B. Antennæ closely approximated at base; tarsal claws very small, approximated . CLYTELLUS, p. 312.

Genus **EPIPEDOCERA.**

Epipedocera, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 339 (1863); *Lacord. Gen. Coléopt.* ix, p. 93 (1869).

Type, *E. zona*, Chevr.

Range. Indo-Malayan Region.

Head short, with a narrow transverse elevation between the antennæ; vertex sloped downwards from the occiput; front subvertical, transverse, flattened, not marked off from the clypeus by lines or sutures; eyes small, rounded or oval, entire or only very feebly emarginate towards the antennæ. Antennæ nearly (sometimes quite) equal to the body in length in the ♂, shorter in the ♀; last four joints rather short, dilated, angulate in front, the first three at the apex and the last near the middle; the joints from the third to the seventh or eighth channelled above; the last joint with a short appendix. Prothorax more or less protuberant and rounded at the middle of each side, deeply constricted at the base; the base very broadly but not deeply emarginate in the middle, and lobed at each side. Mesonotum rather coarsely punctate, without stridulatory area. Elytra scarcely more than twice as long as their width across the base, nearly parallel-sided, rounded externally at

the apex; each narrowly truncate near the suture, and armed, or not, with two short spines. Legs stout and moderately long; femora gradually clavate, the hind pair extended up to, or beyond, the apex of the elytra in the ♂; tibiæ slightly curved, carinate on each side; first joint of hind tarsus shorter than the next two united; tarsal claws not widely divergent. Acetabula of front coxæ rounded, almost (sometimes quite) closed in posteriorly; those of the middle coxæ shut off from the epimera by the apposition of the lateral angles of the meso- and metasternum; intercoxal part of mesosternum broad; episterna of metathorax narrow.

376. **Epipedocera zona**, *Chevr. Mém. Soc. R. Sci. de Liége,* xviii, p. 340 (1863).

Black, the femora, also sometimes the tibiæ and the first antennal joint, testaceous red; elytra marked each at the middle with a transverse, smooth, raised, ivory-white or yellow band, which reaches neither to the suture nor to the outer margin; scutellum covered with a dense silvery-white pubescence. Head closely punctate. Antennæ almost as long as the body in the ♂, shorter in the ♀, black or brownish black; first six joints glabrous and nitid, the rest wholly or in part pubescent; first punctate, more than twice as long as the second, third to eighth canaliculate above. Prothorax protuberant and rounded at the middle of each side, deeply constricted at the base and slightly so at the apex; its width across the middle almost equal to that of the elytra at the base, and very slightly greater than its length along the middle; the sides and upper surface covered with shallow broad punctures, the interstices of which form a reticulation; a narrow band on the depressed part of the base, that borders the basal emargination, smooth and glossy; the basal emargination rather deep and the lateral lobes correspondingly long. Elytra deeply, strongly and very closely punctured, except near the apex, the apical area sparsely and rather feebly punctate and glossy; each bispinose at the apex. Body beneath black or blackish brown; with the pro- and mesosterna, a small spot above each of the front coxæ, an oblique spot on the mesothoracic episterna, a transverse spot at the postero-lateral angles of the metathorax and a narrow band at each side of each of the first three abdominal segments covered with dense silvery-white pubescence. Femora rather thickly punctured.

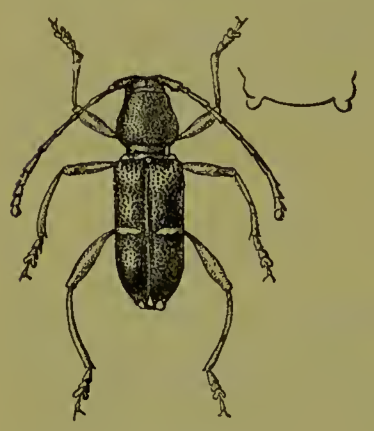


Fig. 99.
Epipedocera zona, Chevr. ♀. × $\frac{2}{1}$.

Length 9–11½; *breadth* 2½–3¼ mm.
Hab. Nepal; Sikhim: Darjeeling.

377. **Epipedocera laticollis**, sp. n.

Closely allied to *E. zona*, Chevr., which it resembles greatly in colour and markings, but has the prothorax relatively broader and somewhat different in form. The prothorax is strongly, but very obtusely, protuberant at the middle of each side, with a distinct constriction at the apex as well as at the base, though less deep; its width across the middle is equal to, or even slightly greater than, that of the elytra at the base, and distinctly greater than its length along the middle; it has, as in *E. zona*, a narrow glossy band at the base, that borders the basal emargination, the rest of the surface reticulately punctate and dull. The species is smaller on the average than *E. zona*, and differs further in the absence of pubescent bands on the second and third segments of the abdomen; the latter segment very sparsely furnished with long whitish hairs.

Length 8–9; *breadth* $2\frac{1}{4}$–$2\frac{1}{2}$ mm.

Hab. Upper Burma: Maymyo, 3000 ft. (*Bingham*), North Chin Hills (*Watson*).

A slight variety, with black legs, occurs in Siam.

378. **Epipedocera affinis**, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 341 (1863).

Black; dull above; elytra marked each at the middle with a short, raised, ivory-yellow band which reaches neither to the suture nor to the outer margin; the scutellum, an oblique spot on each of the mesothoracic episterna, and a transverse spot at the postero-lateral angles of the metathorax covered with a dense silvery-white pubescence. Antennæ of the ♂ almost as long as the body; first seven joints black and glossy; second half as long as the first; third to seventh canaliculate above; last four dilated, angulate in front at the apex, covered faintly with ashy-grey pubescence. Prothorax protuberant and rather sharply rounded at the middle of each side, deeply constricted at the base, not so long as the width across the middle; the sides and all the upper surface up to the edge of the basal emargination closely covered with rather large but shallow punctures, the interstices of which form a fine reticulation; the basal emargination broad but shallow. Elytra strongly, deeply and very closely punctured, except on the ivory bands; each feebly bidentate at the apex. Legs pitchy brown to black in colour; femora somewhat closely punctate; tibiæ carinate on each side.

Length 9–12; *breadth* 3–4 mm.

Hab. Southern India: Nilgiri Hills, Belgaum.

379. **Epipedocera undulata**, *Hope* (Clytus), *Gray's Zool. Misc.* p. 28 (1837).

Clytus hardwickii, *White, Cat. Coleopt. B. M., Longic.* p. 288 (1855).

Head and prothorax dark red; elytra yellowish red, with the middle third part of each dull black, marked at the middle with a

raised, transverse, ivory-yellow band, which is smooth and somewhat angulate in front, sparsely punctured posteriorly, and reaches neither to the suture nor to the outer margin. Head closely punctate. Antennæ a little longer than the body in the ♂, shorter in the ♀; first seven joints brownish red and glossy, the last four dull brownish black, with a faint grey pubescence; third to eighth channelled above. Prothorax rounded, but scarcely protuberant, at the sides, strongly constricted at the base and narrowed a little in front; its width across not greater than its length along the middle; the surface closely reticulately-punctate up to the edge of the basal emargination. Scutellum densely covered with white pubescence. Elytra moderately and not very thickly punctured, sparsely covered with setigerous granules; narrowed from the base to the middle and slightly widened again posteriorly; each elytron subtruncately rounded and unarmed at the apex. Body beneath yellowish brown, marked as in *E. zona* with spots and patches of dense white pubescence. Legs reddish; femora punctate, the hind pair very closely so.

Length 9–11½; *breadth* 2¼–3 mm.

Hab. Nepal; Darjeeling.

Genus CENTROTOCLYTUS.

Centrotoclytus, *Motschulsky, Bull. Soc. Nat. Moscou*, 1863, No. ii, p. 496.

Epipedocera, *Chevr.* (part.) *Mém. Soc. R. Sci. de Liége*, xviii, p. 339 (1863).

Plangone, *Thoms. Syst. Ceramb.* p. 154 (1864); *Lacord. Gen. Coléopt.* viii, p. 537 (1869).

Type, *C. quadridens*, Motsch.

Range. Ceylon, Andaman Is., and Malay Peninsula.

Agrees generally in form and structure with *Epipedocera*, Chevr.: the following characters, however, serve to distinguish it from that genus:—Second joint of the antennæ much longer than broad, nearly half as long as the third; mesonotum provided with a stridulatory area; elytra furnished each with a rather sharp lateral carina, reaching nearly to the shoulder in front and to within a variable distance of the apex posteriorly.

The type species of this genus looks like a small *Epipedocera* and was, in fact, included in that genus by Chevrolat, who thereby clearly recognized its true affinities. It is remarkable, therefore, that both by Thomson and Lacordaire it was placed in a group widely separated from *Epipedocera* and its allies.

380. **Centrotoclytus quadridens**, *Motsch. Bull. Soc. Nat. Moscou*, 1863, No. ii, p. 496; *id.* (Centroclytus) *l. c.* 1861, No. i, pl. 9, fig. 31.

Epipedocera setulosa, *Chevr. Mém. Soc. R. Sci. de Liége*, xviii, p. 342 (1863).

Plangone biseburata, *Thoms. Syst. Ceramb.* p. 155 (1864).

Reddish brown to dark brown in colour: prothorax with a

transverse spot or band of silvery-white pubescence on each side at the base; elytra with a spot of silvery-white pubescence over each shoulder, another at the outer apical angle, and a transverse, slightly raised, ivory band at the middle of each elytron, that extends inwards from the lateral carina but does not reach to the suture; posterior half of the elytra sparsely furnished with short, thick, whitish setæ. Antennæ reach to the middle of the elytra; not canaliculate above; joints second to fifth slightly nodose at the apex, seventh to eleventh and the apex of the sixth dilated; third to sixth subequal in length, seventh to eleventh much shorter. Prothorax longer than broad, rounded at the sides, deeply constricted at the base; the surface dull, very closely covered with shallow punctures, the interstices forming a fine reticulation; the base broadly but not deeply emarginate in the middle, and expanded in a short broad lobe at each side. Elytra slightly raised near the base, depressed and somewhat constricted at the middle where the ivory band crosses; the surface strongly but somewhat irregularly and not very closely punctured; subnitid posteriorly, duller near the base; each narrowly truncate and bispinose at the apex. Body beneath covered for the most part with silvery-white pubescence. Femora gradually clavate, closely punctured, sparsely pubescent at the sides, but with a narrow band of silvery pubescence along the dorsal border; tibiæ with short sparse setæ.

Length 5–6; *breadth* $1\frac{1}{5}$ mm.

Hab. Ceylon: Newara Eliya Mts.

381. **Centrotoclytus carinatus**, sp. n.

Reddish in colour; elytra glossy and varying from reddish brown to a darker shade, each with a raised, transverse, ivory spot at the middle extended to the lateral carina but not to the suture. Antennæ extend beyond the middle of the elytra, not canaliculate above; second joint not quite half as long as the third; third longer than fourth; fourth to sixth subequal; seventh shorter; eighth to tenth dilated, and angulate at the apex, each scarcely longer than broad. Prothorax a little longer than broad, rounded at each side, slightly narrowed anteriorly, and deeply constricted at the base; the surface with not very close, shallow punctures; the base broadly and rather deeply cut out, with a straight margin, in the middle, but expanded in a lobe at each side. Scutellum covered with a dense sericeous-white pubescence.

Fig. 100.—*Centrotoclytus carinatus*, Gahan. ×.

Elytra feebly depressed and slightly constricted at the middle, strongly but not very closely punctured, the punctures sparser and smaller on the apical area; the lateral carina somewhat sinuous, extends almost from the shoulder up to the middle of the

apical margin; the apices truncate and bispinose. Body beneath rather faintly covered with greyish-white silky pubescence, which becomes somewhat denser on the episterna of the mesothorax. Femora gradually and not strongly clavate, distinctly but not very closely punctured: the hind pair not extended to the apex of the elytra.

Length 8–9; *breadth* $2\frac{1}{4}$ mm.

Hab. Andaman Islands.

Genus BICON.

Bicon, *Pascoe, Proc. Zool. Soc.* 1866, p. 522; *Lacord. Gen. Coléopt.* viii, p. 536 (1869).

Type, *B. sanguineum*, Pasc., a species from Penang.

Range. Southern India and the Malay Peninsula.

Very closely allied to *Epipedocera*, Chevr., of which it might be regarded as a subgenus differentiated by the following characters:—Prothorax longer than broad, not strongly rounded at the sides; elytra furnished each with a somewhat feebly raised lateral carina; femora less strongly thickened, the hind pair not reaching to the apex of the elytra.

Two species only are known—one from Penang, the other from Canara; the latter is here described for the first time. Although so closely related to *Epipedocera*, the genus was placed far from it by Lacordaire and in a different group.

382. **Bicon bimaculatum**, sp. n.

Blood-red in colour and dull; elytra with a dark brown area that occupies about the middle third part, marked each at the middle with a raised and polished ivory-yellow spot; the scutellum and some spots at the sides of the thorax and first two abdominal segments densely covered with silky-white pubescence. Antennæ reach to the middle of the elytra; first joint rugulose-punctate, last six joints dilated and, except the last, acutely angulate in front at the apex. Prothorax about one-fourth longer than broad, rounded a little at the sides, narrowed slightly in front and more strongly towards the base, closely covered with rather shallow punctures. Elytra closely and strongly punctured and, on the posterior part, sparsely granulated; each elytron narrowly emarginate and bispinose at the apex, furnished along each side with a somewhat sinuous carina which does not extend to the base or apex; the lateral margins very finely serrulate. Body beneath coloured like the upperside; the sterna, and the middle of the first two abdominal segments more or less faintly, clothed with greyish-white pubescence. Femora gradually clavate; densely and rather coarsely punctate; the hind pair not extended to the apex of the elytra.

Length 8–10; *breadth* $2\frac{1}{4}$–3 mm.

Hab. Canara: Katgal (*T. R. D. Bell*).

Genus HALME.

Halme, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 641 (1869).

Type, *H. cleriformis*, Pasc., a species found in Borneo and Mysol.

Range. Ceylon, Burma, Andaman Is., Malay Peninsula and Archipelago.

Allied to *Epipedocera*, Chevr.; resembles that genus in form and agrees with it in all but the following characters:—Second joint of the antennæ much longer than broad; prothorax with the basal margin straight and entire; elytra rounded and unarmed at the apex; intercoxal part of the mesosternum only moderately broad; femora abruptly clavate, with a distinct and rather long basal peduncle.

Five species are known, of which one only—the type—has up to the present been described. They are mostly of smaller size than the species of *Epipedocera*, and differ further in all being furnished sparsely with long erect hairs.

383. Halme cinctella, sp. n.

Dark brown, glossy, furnished sparsely with longish erect hairs; elytra marked each with a narrow, slightly raised, ivory band that crosses at the middle but does not reach either the suture or the outer margin. Head rather closely but not strongly punctured. Antennæ almost as long as the body, with the last three or four joints slightly dilated; first joint closely punctured; second half as long as the third, which is scarcely longer than the fourth. Prothorax longer than broad, strongly convex in the middle both above and at the sides, deeply constricted at the base and marked near the apex with a transverse groove; the disc strongly and rather closely punctured. Elytra closely and strongly punctured between the base and the median band, less closely just behind the band and sparsely and more feebly near the apex. Body beneath marked with spots of white pubescence at the sides of the meso- and metathorax. Femora clavate and pedunculate, the peduncles somewhat testaceous at the base.

Fig. 101.—*Halme cinctella*, Gahan. × 4/1.

Length 4–5; *breadth* 1 mm.

Hab. Ceylon (*Lewis*).

This species resembles *H. cleriformis*, Pasc., but is at once distinguishable from it by the absence of a white band of pubescence from the base of the prothorax.

384. **Halme cærulescens**, sp. n.

Brown, slightly tinted with metallic blue, above; antennæ, legs, and abdomen more or less reddish; each elytron marked at the middle with two narrow ivory spots set at an angle to each other so as to form a band which reaches neither to the suture nor to the outer margin. Antennæ of the ♂ as long as the body, not dilated towards the apex; first joint sparsely and not strongly punctured; second more than half as long as the third; third to sixth subequal; seventh to tenth gradually shorter; those of the ♀ extend past the middle of the elytra, with joints seventh to tenth gradually and slightly thicker. Prothorax rounded at the sides, almost as broad as long, narrowed at the base, closely punctured; covered, but not very densely, with greyish pubescence at the sides and at the front and hind borders, in addition it is furnished, like all the other parts of the body, with long erect hairs. Elytra somewhat flattened above, scarcely depressed in the middle, slightly contracted there at the sides, strongly and very closely punctured, the punctures less close and strong near the apex. Prosternum the whole way across in front of the coxæ strongly and closely punctured, almost bare of pubescence, somewhat flattened in the ♂ and more convex in the ♀; hind-breast pubescent; abdomen finely and very sparsely punctate; femora clavate and pedunculate, almost impunctate; tibiæ not distinctly carinate.

Length 6–8; *breadth* 2–2⅕ mm.

Hab. Andaman Islands.

Genus CLYTELLUS.

Clytellus, *Westwood, Trans. Ent. Soc.* (2) ii, p. 240 (1853); *Lacord. Gen. Coléopt.* ix, p. 94 (1869).

Type, *C. methocoides*, Westw., a species from Hong Kong.

Range. China, Andaman Islands, Borneo and Celebes.

Ant-like in form. Head with the front vertical, rectangular; the eyes obliquely oval, entire or nearly so. Antennæ very closely approximated at the base, as long as the body, filiform; first joint stout; second longer than broad; third subequal to or shorter than the fourth; eleventh longer than the tenth. Prothorax much longer than broad, constricted and depressed near the base, strongly raised and somewhat curved in front, unarmed at the sides. Elytra broader than the prothorax, scarcely twice as long as broad, strongly convex posteriorly, rounded at the apex, transversely depressed just before the middle, each elytron with a dorsal crest or tubercle near the base, the shoulders prominent. Legs moderately long; femora pedunculate and clavate, those of the hind pair extended to the apex of the elytra or slightly beyond it; first joint of hind tarsi shorter than the second and third united; tarsal claws small, scarcely divergent (this character alone is sufficient to

distinguish this genus from all the other genera of the Cerambycidæ). Intercoxal process of prosternum narrow, prolonged and feebly dilated posteriorly, the epimera extended inwards to meet it.

385. **Clytellus olesteroides**, *Pascoe, A. M. N. H.* (5) xv, p. 56 (1885)

Black; the head, prothorax, and the disc of the elytra near the base somewhat opaque, the rest of the elytra and the legs more or less glossy; front of head, sides of prothorax, apex of elytra and the body beneath covered with a somewhat silvery-grey pubescence. Antennæ nearly as long as the body; third joint shorter than the first or fourth and less than twice as long as the second, fifth slightly longer than the fourth; sixth to eleventh gradually and slightly thicker, and faintly covered with grey pubescence. Prothorax impunctate, furnished above with a narrow median carina. Scutellum grey. Elytra sparsely punctured in rows from the base to the submedian depression, the latter sparsely covered with rather thick, ashy-white setæ; disc of each slightly raised near the base and furnished with a feeble median crest. Femora carinate along each side, the club narrowed a little before the apex, widened again towards the ventral side at the apex. First segment of abdomen nearly as long as the remaining segments united.

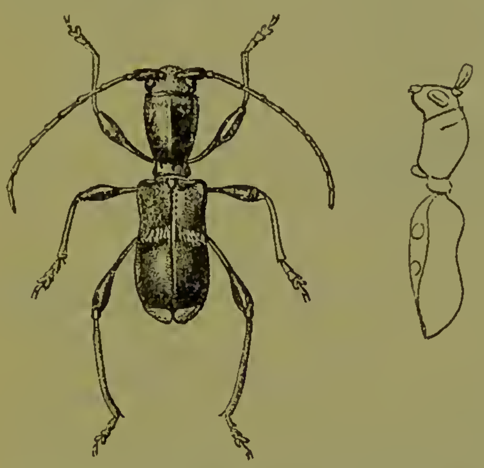


Fig. 102.—*Clytellus olesteroides*, Pasc. × $\frac{4}{1}$.

Length $5\frac{1}{2}$–$6\frac{1}{2}$; *breadth* $1\frac{1}{2}$ mm.

Hab. Andaman Islands.

From its ant-like form, the close approximation of the antennæ at the base and the very small, sub-approximate, tarsal claws, there will be little difficulty in recognizing this interesting little species.

Group *CLEOMENINI.*

Head raised at the sides and flat or slightly concave in the middle between the antennæ. Eyes finely facetted, emarginate, not prominent. Antennæ shorter than the body in ♀, shorter or a little longer than the body in ♂. Prothorax usually longer than broad, unarmed at the sides. Scutellum small. Elytra generally flattened above near the suture. Front coxæ globular, their acetabula rounded on the outer side, generally closed, sometimes open, posteriorly. Acetabula of middle coxæ shut off from the epimera. Femora pedunculate and clavate. Tarsal claws widely divergent.

Synopsis of Genera.

A. First abdominal segment as long at least as the next two united .... ARTIMPAZA, p. 314.
B. First abdominal segment shorter than the next two united.
  a. Prothorax a little or not longer than broad; hind femora with short basal peduncle.... DERE, p. 315.
  b. Prothorax much longer than broad; hind femora with long basal peduncle.
    a'. Acetabula of front coxæ closed posteriorly .... CLEOMENES, p. 316.
    b'. Acetabula of front coxæ open posteriorly .... NIDA, p. 318.

Genus ARTIMPAZA.

Artimpaza, *Thoms. Syst. Ceramb.* p. 160 (1864); *Lacord. Gen. Coléopt.* ix, p. 99 (1869).

Type, *A. odontoceroides*, Thoms., a species from the Malay Peninsula.

Range. Andaman Islands, Malay Peninsula and Borneo.

Head slightly raised and subacute on each side between the antennæ; front oblique, flat, transverse; eyes emarginate, finely facetted. Antennæ about one-fifth longer than the body in the ♂, much shorter than the body in the ♀; first joint slightly curved, thickened towards apex, much shorter than the third; third and fifth to seventh subequal in the ♂, the fourth slightly shorter; sixth to tenth angulate anteriorly at the apex, these joints somewhat thickened and more strongly angulated in the ♀. Prothorax much longer than broad, slightly rounded at the sides, rather deeply constricted and transversely furrowed near the apex, less deeply near the base, the basal groove sinuate. Scutellum subelongate. Elytra flattened above, narrowed and somewhat dehiscent posteriorly, each elytron more or less acuminate or spined at the apex. Femora pedunculate, strongly clavate, the hind pair extended to the apex of the elytra or to a little beyond it in the ♂. First joint of hind tarsus as long as the next two joints united. Intercoxal process of prosternum narrow in the middle, broadly dilated posteriorly, so as to meet the epimera. Episterna of metathorax narrowed posteriorly. Abdomen convex, broad towards the middle, narrowed posteriorly; the first segment as long at least as the next two united.

386. **Artimpaza bicolor**, *Pascoe, A. M. N. H.* (5) xv, p. 56 (1885).

Chestnut-red, glossy; elytra pitch-brown, very glossy; antennæ with the first joint glossy red, the rest duller, third to sixth joints at the apex, and the succeeding joints almost wholly, infuscate.

Head densely punctate. Prothorax one-third longer than its width at the middle, broadly rounded at the sides, with a deep constriction and transverse groove a little behind the apex, another constriction and a sinuate groove near the base; very strongly but not densely punctured above and on the sides, less strongly but more densely punctured beneath, the anterior groove and the part in front of it nearly impunctate. Scutellum covered with silvery grey pubescence. Elytra distinctly and somewhat thickly punctured, except at the shoulders and apex; each narrowed to an obtuse point at the apex. Breast, abdomen and legs glossy, almost impunctate, furnished with a few sparse longish hairs. First abdominal segment of ♂ slightly longer than the next two united. Hind femora extend a little past the apex of the elytra in the ♂.

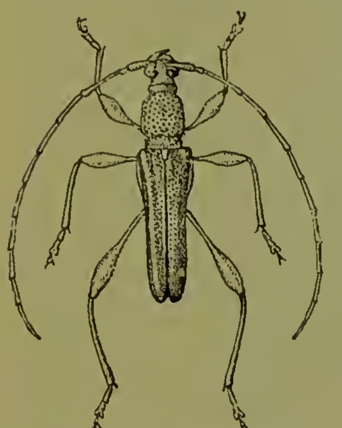


Fig. 103.—*Artimpaza bicolor*, Pasc., ♂. × $\frac{2}{1}$.

Length 15 mm.

Hab. Andaman Islands.

Genus DERE.

Dere, *White, Cat. Coleopt. B. M., Longic.* ii, p. 248 (1855); *Lacord. Gen. Coléopt.* ix, p. 100 (1869).

Type, *D. thoracica*, White, a species from North China.

Range. China, India, Ceylon and Borneo. Very closely allied forms occur in Africa.

Head slightly raised on each side between the antennæ; eyes finely facetted, emarginate, the upper lobe short and narrow; front oblique, flat. Antennæ extended to the middle of the elytra in the ♀, to some distance beyond it in the ♂; third joint twice as long as the fourth; fourth slightly shorter than the fifth; fifth to tenth subequal, increasing very slightly in thickness, eleventh obtuse at the apex. Prothorax as long as, or longer than, broad, rounded at the sides, narrowed at the base and also but more gradually in front. Elytra moderately long, flattened or slightly depressed along the inner part of the disc, narrowed posteriorly, each elytron emarginate and bidentate at the apex. Legs moderately long; femora clavate, the hind pair do not reach to the end of the body; first joint of the hind tarsi almost as long as the next two joints united. Acetabula of front and middle coxæ closed; intercoxal process of prosternum rather narrow, dilated posteriorly, that of the mesosternum moderately broad. Episterna of metathorax with the inner border curved posteriorly, the apex pointed. First abdominal segment almost as long as the second and third united.

387. **Dere affinis**, sp. n.

Head, antennæ, legs and body beneath (the prothorax excepted) black; prothorax entirely red; elytra dark metallic blue. Head somewhat roughly punctured above, more finely in front. Prothorax somewhat dull, densely rugulose-punctate. Elytra subnitid, very densely and somewhat asperately punctured; each with two spines at the apex, the outer spine nearly twice as long as the sutural one. Breast and abdomen densely punctate, covered somewhat slightly with dark grey pubescence. Legs subglabrous and nitid, the hind femora densely punctured, the clavate portion of the middle and front femora smooth and almost impunctate; middle femora feebly carinate in front.

Fig. 104.
Dere affinis, Gahan.
× $\frac{2}{1}$.

Length 9; *breadth* $2\frac{1}{2}$ mm.

Hab. Northern India.

This species is closely allied to the Chinese *D. thoracica*, White, but differs in the prothorax which is entirely red, and in the elytra which are more strongly spined at the apex.

388. **Dere fulvipennis**, sp. n.

Prothorax and elytra entirely fulvous red; antennæ, legs and all the rest of the body black. Prothorax and elytra very closely punctured; each elytron bispinose at the apex, the outer spine longer than the sutural one. Breast at the sides and the hind femora thickly punctured; middle and hind femora carinate in front near the lower border.

Length 9; *breadth* $2\frac{1}{4}$ mm.

Hab. Southern India.

389. **Dere apicalis**, sp. n.

Head posteriorly and on the middle of the underside, prothorax, mesosternum and all except the apex of the elytra fulvous red; apex of elytra dark brown; legs, antennæ and the rest of the body black. Prothorax not longer than broad, rather strongly rounded at the sides, closely but not very distinctly punctured, dull. Elytra densely punctured, dull, each bispinose at the apex, the outer spine longer than the inner one. Middle femora carinate in front, the hind ones without trace of a carina.

Length 9; *breadth* $2\frac{1}{4}$ mm.

Hab. Ceylon.

Genus **CLEOMENES.**

Cleomenes, *Thoms. Syst. Ceramb.* p. 161 (1864); *Lacord. Gen. Coléopt.* ix, p. 101 (1869).

Type, *C. diammaphoroides*, Thoms., a species from the Philippine Islands.

Range. Burma, Java and Philippine Islands.

Head raised at each side between the antennæ; front oblique, slightly longer than broad; eyes finely facetted, emarginate. Antennæ shorter than the body; third, fourth and fifth joints subequal, each much longer than the first; sixth to tenth successively shorter and thicker, each angulate at apex on the anterior side, eleventh slightly longer than the tenth. Prothorax longer than broad, slightly rounded in the middle at each side, a little constricted near base and apex. Elytra long, somewhat parallel-sided, flattened above near the suture, each emarginate or truncate, and bidentate at the apex. Femora pedunculate and clavate, the hind pair shorter than the abdomen. First joint of hind tarsus equal to or longer than the second and third united. Acetabula of front coxæ almost closed posteriorly; the intercoxal process narrow, a little dilated at the end. Episterna of metathorax narrowed to a point posteriorly. Abdomen cylindrical, first segment a little longer than the second.

390. **Cleomenes chryseus**, sp. n.

Head, prothorax, scutellum and body beneath densely covered with golden pubescence; head black behind the eyes and across the hind border; prothorax with four black spots above and a small anterior spot on each side, the two anterior discal spots smaller, subapproximate, the two posterior larger and more widely separated; a short median carina also black. Elytra testaceous yellow, marked each with three narrow, longitudinal, dull black bands—one along the suture, another along the outer margin; the third extends from above the shoulder in front to some distance beyond the middle of the disc behind, and is united posteriorly to the outer band by means of two narrow oblique spots; that part of the elytron which lies between these spots and the sutural band densely covered with golden pubescence; the rest of the elytra, except near the apex, bare of pubescence; antennæ and legs ferruginous, the hind femora more or less infuscate. Antennæ extend to the apical fifth or sixth of the elytra in the ♀; third, fourth and fifth joints subequal, each much longer than the first, the latter densely punctate. Prothorax slightly protuberant at the middle of each side, narrowed in front of and behind the protuberance; the black spots densely punctured. Elytra strongly and densely punctured, the punctures in rows along the disc, less regular on the sides; the inner testaceous band nitid, the outer one duller and less yellowish in colour; apices truncate, slightly emarginate, feebly bidentate.

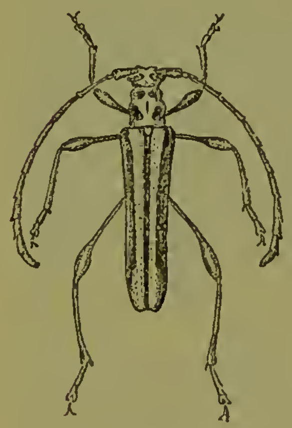


Fig. 105.
Cleomenes chryseus, Gahan. × $\frac{3}{1}$.

Length 14; *breadth* $2\frac{1}{2}$ mm.

Hab. Upper Burma: Ruby Mines district (*Doherty*).

Genus NIDA.

Nida, *Pascoe, A. M. N. H.* (3) xix, p. 312 (1867); *Lacord. Gen. Coléopt.* ix, p. 104 (1869).

Type, *N. flavovittata*, Pasc.

Range. Burma and Andaman Islands.

Head slightly raised at each side between the antennæ, short behind the eyes; the front declivous, transverse; eyes finely facetted, emarginate. Antennæ longer than the body, setaceous; first joint slightly curved; third longer than the first or fourth, slightly shorter than the fifth. Prothorax much longer than broad, subcylindrical, very slightly narrowed towards base and apex. Elytra long, narrow, parallel-sided, subtruncate at the apex. Femora pedunculate and clavate, the hind pair extended almost to the apex of the elytra. First joint of hind tarsi about equal in length to the second and third united. Acetabula of front coxæ open posteriorly, the intercoxal process narrow, slightly dilated at the end. Acetabula of middle coxæ shut off from the epimera. Episterna of metathorax parallel-sided, truncate posteriorly. Abdomen parallel-sided, the segments successively and gradually shorter.

391. **Nida flavovittata**, *Pascoe, A. M. N. H.* (3) xix, p. 312 (1867).

Black; head and pronotum faintly covered with short greyish pubescence; prothorax with a **C**-shaped band of white pubescence on each side, the open side of the band uppermost; scutellum white. Elytra each with a broad longitudinal band of a yellowish-testaceous colour that runs close along the suture, these bands faintly covered with a rather long and somewhat transversely laid pubescence. Body beneath with a greyish pubescence, which becomes denser and whiter on the sides of the thorax and abdomen. Antennæ about one-fifth longer than the body in the ♂, slightly longer than it in the ♀; third joint scarcely longer than the first, but distinctly longer than the fourth; fifth slightly longer than the third; sixth and seventh subequal with the fifth; eighth to tenth gradually shorter. Prothorax about one-third longer than broad, slightly rounded at the middle of each side, narrowed gradually towards the base, broadly but feebly constricted before the apex, closely but not strongly punctured; the disc with a short smooth line, sometimes obsolete, along the middle and a transverse cariniform elevation before the middle. Elytra closely and almost uniformly punctate from base to apex. Femora pedunculate, clavate near the apex.

Fig. 106.
Nida flavovittata, Pasc. × $\frac{3}{1}$.

Length $13\frac{3}{4}$ mm.

Hab. Burma: Pegu and North Chin Hills; Siam.

392. **Nida andamanica**, sp. n.

Very like *N. flavovittata*, Pasc., but differs from it by the absence of the testaceous band along each elytron, and in the **C**-shaped white band at each side of the prothorax which is less distinctly marked; the anterior part of this band widened out and greyish, rather than white, in colour. The testaceous band of *N. flavovittata* replaced by faint grey bands, formed of pubescence the hairs of which lie somewhat transversely; the underlying derm, however, is as a rule quite black, although a small testaceous spot is in some specimens visible near the base.

Length 11–14; *breadth* 2–2½ mm.

Hab. Andaman Islands.

As this form agrees structurally with *N. flavovittata*, it ought, perhaps, to be regarded as a race or local variety of that species, sufficiently different in colour to be entitled to a distinctive name.

Group *GLAUCYTINI.*

Head short, slightly concave or sometimes nearly flat between the antennæ; front vertical, somewhat narrowed between the eyes, especially in the male; eyes large, prominent, finely facetted, deeply emarginate; antennal supports emarginate in front. Antennæ longer as a rule than the body in both sexes. Prothorax subcylindrical, unarmed at the sides. Front coxæ globular, their acetabula rounded on the outer side, closed or very nearly closed posteriorly. Acetabula of middle coxæ not open to the epimera. Legs variable in length; the femora more or less distinctly thickened towards the apex; the hind tarsi not long, the first joint very little (sometimes not) longer than the second and third united. Vein Cu 1 of wings simple; Cu 2 absent.

Synopsis of Genera.

A. Prothorax scarcely longer than broad; hind femora do not extend to apex of elytra in ♂ . . IRESIOIDES, p. 319.
B. Prothorax one-third longer than broad; hind femora extend to apex of elytra in ♂ . . . . POLYPHIDA, p. 321.

Genus **IRESIOIDES.**

Iresioides, *Thoms. Archiv. Ent.* i, p. 291 (1857); *Lacord. Gen. Coléopt.* ix, p. 120 (1869).

Type, *I. ferox*, Thoms., a species from Madagascar.

Range. Madagascar and Ceylon.

Head short; flattened or slightly concave between the antennal supports, the latter slightly raised, emarginate in front; eyes prominent, deeply emarginate, the lower lobes extended in front

below the base of the antennæ; front vertical, a little narrowed between the eyes. Antennæ longer than the body in the ♂, equal to or slightly longer than the body in the ♀; fourth joint shorter than the third or fifth. Prothorax subcylindrical, a little longer than broad. Elytra truncate at the apex. Legs subequal in length; femora pedunculate and clavate, the hind pair not extended to the apex of the elytra; first joint of tarsi shorter than the second and third united. Front coxæ globular, their acetabula closed posteriorly. Acetabula of middle coxæ shut off from the epimera.

393. **Iresioides moesta**, *Pascoe* (Obrium), *Trans. Ent. Soc.* (2) v, p. 26 (1859).

♀. Brownish in colour, covered above with short, yellowish-grey, silky pubescence, so arranged on the elytra as to exhibit darker and lighter bands according to its greater or less deneness; body beneath covered with silvery-grey pubescence. Head closely punctured, nearly flat between the antennal supports. Antennæ as long as the body, reddish brown; the third to sixth joints at the apex, and the succeeding joints entirely, dark brown. Prothorax scarcely longer than broad, feebly rounded at the sides, densely punctate, furnished with a short transverse carina on the middle of the disc. Elytra distinctly but not very closely punctured, narrowed and subtruncate at the apex, with the outer angles rounded off. Legs subequal in length, vary in colour from testaceous to dark brown, the tarsi more or less blackish. Last abdominal segment extended some distance beyond the apex of the elytra.

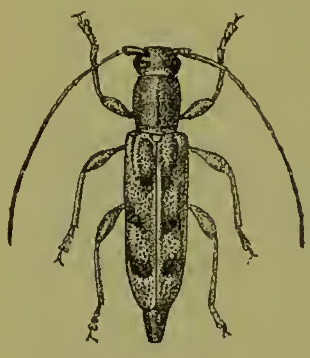


Fig. 107.
Iresioides moesta, Pasc., ♀. × $\frac{3}{1}$.

Length 7–11½; *breadth* 2–3 mm.
Hab. Ceylon: Dikoya district (*G. Lewis*).

394. **Iresioides brunnea**, *Thoms. Syst. Ceramb.* p. 547 (1865).

Very like *I. moesta*, Pasc.; differs only in the elytra, which are uniformly pubescent, not banded in any way, the pubescence somewhat shorter and less glossy. In the male the antennæ are a little longer than the body and the last ventral segment is covered by the elytra.

Length 6½–9; *breadth* 2–2½ mm.
Hab. Ceylon: Dikoya district (*G. Lewis*).
It is probable that this species, founded upon male specimens only, is not distinct from *I. moesta*, Pasc., and that the differences between the two are entirely sexual.

395. **Iresioides kraatzi**, *Thoms. Syst. Ceramb.* p. 547 (1865).

Of a rather dark crimson-brown colour, verging towards black on the head and prothorax; head covered with golden pubescence in front and on two bands above, which curve round the eyes and meet between the antennæ; prothorax marked above with two rather broad longitudinal bands of golden pubescence which are closely approximated at the base, sometimes even united there. Elytra claret-coloured, faintly covered with golden-tawny pubescence which is visible only in reflected light, each elytron marked at the base with a short longitudinal band of denser golden pubescence, this band placed along a slight depression which gradually slopes from the inner side and is sharply limited on the outer. Body beneath covered for the greater part with silvery pubescence. Head distinctly but rather sparsely punctate. Antennæ about one-fourth longer than the body in the ♂. Prothorax subcylindrical, a little narrowed at the base, densely punctate; disc with a short transverse carina in the middle. Elytra distinctly but not very thickly punctured, the punctures subseriate in places; each rounded or narrowly subtruncate at the apex.

Length 6–9; *breadth* $1\frac{1}{2}$–$2\frac{1}{2}$ mm.

Hab. Ceylon.

Genus **POLYPHIDA**.

Polyphida, *Pascoe, Trans. Ent. Soc.* (3) iii, p. 652 (1869).

Type, *P. clytoides*, Pasc., a species from Borneo.

Range. Burma, Malay Peninsula and Borneo.

Nearly allied to *Iresioides*, Thoms.; somewhat similar in form, but the prothorax is longer and more cylindrical, the hind legs longer than the others, with the femora extended to the apex of the elytra in the ♂; the head concave between the antennal supports.

396. **Polyphida metallica**, *Nonfried* (Clytus), *Berl. ent. Zeit.* xxxviii, p. 338 (1893).
Polyphida feæ, *Gahan, Ann. Mus. Civ. Genova*, xxxiv, p. 29, pl. 1, fig. 8 (1894).

Black, densely covered with silky pubescence, which has a somewhat golden tint above, silvery beneath; elytra metallic, covered for the most part with golden pubescence, each with a short, glabrous, chalybeate-blue band that runs back a short distance from the shoulder, and two slightly oblique transverse bands of the same kind placed one just before, the other behind, the middle. Antennæ and legs faintly covered with grey pubescence. Head with a feebly impressed, median, black line along the front, a few sparse punctures on the vertex; front distinctly narrowed between the eyes, more so in the ♂ than in the ♀. Antennæ about equal

in length to the body in the ♀, exceeding it by the last two or three joints in the ♂; first joint with a median longitudinal carina in front. Prothorax about one-third longer than broad, subcylindrical, slightly constricted between the middle and apex. Elytra subseriately and rather strongly punctured, the punctures more distinct on the glabrous bands; each truncate at the apex, feebly dentate at the angles. First joint of the hind tarsus as long as the second and third united.

Length 12; *breadth* $2\frac{3}{4}$ mm.

Hab. Manipur; Upper Burma: Ruby Mines district (*Doherty*).

ALPHABETICAL INDEX.

Acanthophorini, 22.
Acanthophorus, 23.
Ægosoma, 44.
Ægosomini, 41.
æneipennis (Zooblax), 39.
Æolesthes, 126.
affinis (Dere), 316.
affinis (Epipedocera), 307.
Aglaophis, 303.
agnatus (Caloclytus), 362.
albicinctus (Demonax), 296.
albomaculatus (Demonax), 295.
alboscutellatus (Caloclytus), 265.
albosignatus (Demonax), 283.
alcmene (Chloridolum), 199.
alpina (Rosalia), 176.
alteni (Macrotoma), 34.
amabilis (Merionœda), 174.
Amauræsthes, 241, 254.
ambiguus (Arhopalus), 162.
amœna (Xoanodera), 150.
Ancyloprotus, 18.
andamanica (Nida), 319.
andamanicum (Ceresium), 161.
andamanicus (Caloclytus), 265.
andamanicus (Demonax), 290.
andamanicus (Rhaphipodus), 33.
andrewesi (Anœme), 54.
andrewesi (Merionœda), 172.
angustatum (Ægosoma), 46.
angustulum (Ceresium), 158.
angustus (Psilomerus), 300.
Animes, 99.
annularis (Caloclytus), 261.
Anœme, 53.
antennatus (Philus), 57.
antennatus (Sarmydus), 52.
Anthoboscus, 260.
Anubis, 220.
Apatophysis, 69.
aper (Perissus), 257.
Apheles, 62.
Aphrodisium, 205.
apicale (Ceresium), 161.
apicalis (Dere), 316.
apicalis (Nyphasia), 152.
Apiocephalus, 74.
arciferus (Caloclytus), 263.
Arcyphorus, 271.
argentatum (Chelidonium), 211.
arictis (Clytus), 250.
Artimpaza, 314.
ascendens (Demonax), 296.
Asemini, 94.
asperulum (Stromatium), 115.
assimilis (Caloclytus), 269.
Astrimus, 154.
atratum (Prionomma), 17.
audax (Dynamostes), 61.
aurata (Prothema), 235.
aurifaber (Æolesthes), 126.

Baladeva, 8.
balyi (Demonax), 282.
Baralipton, 42.
barbatum (Stromatium), 114.
basicornis (Æolesthes), 126.
bicinctus (Demonax), 294.
bicolor (Artimpaza), 314.
bicolor (Erythrus), 230.
Bicon, 310.
bigibbosus (Ancyloprotus), 19.
bimaculatum (Bicon), 310.
bimaculatus (Psilomerus), 300.
bimaculatus (Tetraommatus), 102.
bipustulatus (Anubis), 221.
birmanicus (Pyrestes), 228.
biseburata (Plangone), 308.
bivittatum (Chloridolum), 198.
bizonatus (Polyzonus), 216.
bowringi (Ægosoma), 48.
bowringii (Rhytidodera), 146.
brama (Cerambyx), 124.
brevipes (Polyzonus), 217.
brunnea (Iresioides), 320.
bucklcyi (Ægosoma), 47.
buqueti (Lophosternus), 13.
buqueti (Xylotrechus), 243.

Cænoptera, 169.
cærulescens (Halme), 312.
Callichromini, 189.
callichromoides (Typodryas), 65.
Callichromopsis, 180.

callidioides (Oplatocera), 108.
callidioides (Tetraommatus), 103.
Callidiopsini, 154.
callizonus (Clytus), 251.
Caloclytus, 260.
calumniata (Pachyteria), 196.
cantharinum (Obrium), 165.
Cantharocnemini, 25.
Cantharocnemis, 26.
cantori (Aphrodisium), 205.
Capnocerambyx, 135.
Capnolymma, 73.
Caraphia, 75.
carinatus (Centrotoclytus), 309.
carinicollis (Xylotrechus), 248.
carinifrons (Xylotrechus), 243.
carinulatum (Stromatium), 118.
castaneum (Tetropium), 95.
Centrotoclytus, 308.
Cephalallus, 96.
Cephalocrius, 96.
cephalotes (Dinoprionus), 43.
Cerambycidæ, 1, 90.
Cerambycides, 90.
Cerambycinæ, 90.
Cerambycini, 90, 119.
Ceresium, 156.
championi (Erythrus), 229.
Chelidonium, 210.
chionospila (Clytocera), 280.
Chloridolum, 198.
Chlorophorus, 260.
chryseus (Cleomenes), 317.
chrysogaster (Pachyteria), 197.
cinctella (Halme), 311.
cinctum (Chelidonium), 212.
cingalense (Ægosoma), 46.
cingalensis (Caloclytus), 268.
cingalensis (Capnolymma), 73.
cingalensis (Nothopeus), 204.
cinnyris (Chloridolum), 200.
Cladopalpus, 59.
clavicornis (Anubis), 220.
Cleomenes, 316.
Cleomenini, 313.
cleriformis (Halme), 311.
Clytanthus, 260.
Clytellus, 312.
clytina (Leptura), 84.
Clytini, 239.
Clytocera, 279.
clytoides (Polyphida), 321.
Clytus, 250.
coccineus (Ephies), 87.
coccineus (Erythrus), 231.
cognatus (Chlorophorus), 262.
Coloborhombus, 2(2.
Colobus, 202.
columbina (Distenia), 62.
compressus (Zoodes), 118.
Conchopterus, 169.
concmna (Phyodexia), 183.
Conothorax, 129.
consanguineus (Zonopterus), 191.
consocius (Plocæderus), 124.
conspicua (Pyrocalymma), 89.
contortus (Xylotrechus), 249.
corallinus (Pachylocerus), 225.
corbetti (Ibidionidum), 168.
corbetti (Zonopterus), 192.
coriarius (Prionus), 14.
corpulentus (Prionus), 15.
costipenne (Ægosoma), 49.
crassicornis (Pachylocerus), 226.
crenata (Macrotoma), 36.
cretatum (Ceresium), 157.
cribrata (Caraphia), 75.
cribratum (Trinophyllum), 156.
cribricolle (Aphrodisium), 207.
cribricollis (Hesperophanes), 113.
cribripennis (Leptura), 85.
Criocephalus, 96.
Criomorphus, 95.
cruentus (Ephies), 87.
cursor (Oxymirus), 79.
curtipes (Gelonætha), 155.
cyanipennis (Plocæderus), 120.
Cyclodera, 184.
Cyrtognathus, 5.
Cyrtonops, 59.
Cyrtosternus, 9.

Dandamis, 50.
decempunctata (Rosalia), 179.
decens (Demonax), 288.
decorus (Demonax), 288.
delesserti (Demonax), 298.
demissus (Derolus), 136.
demissus (Pachydissus), 136.
democraticus (Polyzonus), 220.
Demonax, 280.
Dere, 3.5.
Derolus, 135.
desfontainei (Purpuricenus), 184.
Deuteromma, 100.
Dialeges, 141.
diammaphoroides (Cleomenes), 316.
diana (Rhaphuma), 271.
Diatomocephala, 156.
difformis (Macrotoma), 38.
dignus (Demonax), 286.
diluta (Salpinia), 163.
dimidiata (Euchroa), 194.
dimidiata (Pachyteria), 196.
dimidiatus (Demonax), 294.
Dinoprionus, 43.
Diorthus, 132.
discicollis (Derolus), 136.
Dissosternus, 7.
Distenia, 62.
Disteniides, 58.
Disteniinæ, 58.
Disteniini, 58.
distinguendus (Caloclytus), 264.
diversus (Zonopterus), 193.
divisus (Demonax), 295.
Dœsus, 55.
dohertii (Caloclytus), 267.
dohertii (Demonax), 291.

dohertii (Distenia), 64.
dohertii (Perissus), 258.
dohertii (Pyrestes), 229.
doreadioides (Teledapus), 77.
Dorysthenes, 5.
downesi (Cantharocnemis), 26.
dravidiana (Distenia), 64.
Dymasius, 139.
Dynamostes, 61.

eburifera (Gnatholea), 111.
eburioides (Zoodes), 118.
egenus (Margites), 137.
elateroides (Zooblax), 40.
elegantula (Rhaphuma), 279.
Elezira, 280.
ellioti (Macrotoma), 38.
elliotti (Prionus), 16.
Elydnus, 139.
Ephies, 87.
Epipedocera, 305.
Epipedocerini, 305.
Epodus, 303.
erosus (Hesperophanes), 113.
Erythrus, 229.
Euchroa, 193.
Europa, 250.
Eurybatus, 176.
Eurycephalus, 187.
Euryphagus, 187.
Eurypoda, 28.
Eurypodini, 27.
exiguus (Margites), 137.
eximius (Pyrestes), 227.
exoticus (Criocephalus), 96.

falco (Lophosternus), 12.
fallax (Rhaphuma), 276.
fasciata (Aglaophis), 304.
fasciata (Pachyteria), 195.
fasciatus (Polyzonus), 213.
fasciatus (Purpuricenus), 185.
feæ (Polyphida), 321.
femorata (Ipothalia), 222.
fenestratus (Stenhomalus), 166.
ferox (Iresioides), 319.
ferrugineus (Cerambyx), 121.
ferrugineus (Ploeæderus), 121.
festiva (Xystrocera), 107.
filiformis (Clytus), 296.
filiformis (Molorchus), 170.
filiformis (Tetraommatus), 101.
fimbriatus (Anubis), 222.
fisheri (Macrotoma), 35.
flavipes (Melegena), 66.
flavitarsis (Zonopterus), 191.
flavocinctus (Polyzonus), 216.
flavovittata (Nida), 318.
formicoides (Demonax), 297.
formosa (Rosalia), 180.
frainii (Leptura), 86.
fryana (Gnatholea), 111.
fryanus (Demonax), 293.
fryanus (Thranius), 238.
fulgurata (Rhaphuma), 274.
fulguratus (Zoodes), 117.
fuliginosus (Perissus), 254.
fulvescens (Dymasius), 140.
fulvescens (Protaxis), 93.
fulvipennis (Dere), 316.
fulvus (Nothopeus), 203.
funebris (Demonax), 299.
funestum (Callidium), 114.
fuscipennis (Nyphasia), 152.

gahani (Raphipodus), 32.
Gelonætha, 154.
geniculata (Rhaphuma), 296.
geniculatum (Ceresium), 158.
gestroi (Xylotrechus), 246.
gibbicolle (Chelidonium), 213.
gibbosus (Thranius), 237.
gigas (Cerambyx), 121.
Glaucytini, 319.
globosa (Xystrocera), 106.
globulicollis (Philus), 57.
Gnatholea, 110.
gracile (Ceresium), 157.
gracilipes (Homalomelas, 233.
Grammographus, 280.
grandis (Neoccrambyx), 125.
granulosus (Paraphrus), 14.
gravida (Rasalia). 178.
griffithi (Aphrodisium), 209.

hageni (Cladopalpus), 60.
Halme, 311.
hampsoni (Psilomerus), 301.
hampsoni (Xylotrechus), 247.
hardwickianum (Aphrodisium), 208.
hardwickii (Clytus), 307.
hariola (Rosalia), 178.
hausskneehti (Purpuricenus), 186.
haussnechti, *var.* aleppensis (Purpuricenus), 186.
Heliomanes, 169.
hemipterus (Nothopeus), 203.
Hesperophanes, 112.
Hesperophanini, 109.
hirta (Gelonætha), 155.
holosericea (Æolesthes), 127.
holosericeus (Cerambyx), 133.
holosericeus (Neocerambyx), 127.
Homalomelas, 232.
hopei (Lophosternus), 10.
hopei (Remphan), 34.
Hoplitocera, 107.
Hoplocerambyx, 131.
horsfieldii (Rhaphuma), 272.
hugelii (Lophosternus), 11.
humeralis (Plocæderus), 123.
humerosus (Aglaophis), 303.
Hypoëschrus, 104.

Ibidionidum, 168.
ignobilis (Caloclytus), 270.
inclemens (Pachydissus), 133.
incurvatus (Xylotrechus), 248.
indica (Merionœda), 171.
indicola (Æolesthes), 128.
indicus (Hypoëschrus), 104.
indicus (Lophosternus), 10.
induta (Æolesthes), 128.
inermis (Anubis), 220.
inscripta (Macrotoma), 36.
insignis (Tetraommatus), 102.
insipiens (Xylotrechus), 242.
integra (Rhytidodera), 148.
ioscelis (Callichroma), 208.
Ipothalia, 222.
Iresioides, 319.
Isarthron, 95.
Ischnodora, 259.
Isotomus, 260.

javanicum (Ægosoma), 45.
jucundus (Caloclytus), 262.

kalidasæ (Distenia), 63.
kashmiriana (Apatophysis), 70.
kraatzi (Iresioides), 321.
Kunbir, 174.

lacertosum (Ægosoma), 49.
lacordairei (Toxotus), 79.
læta (Rosalia), 179.
lætus (Perissus), 255.
lameerei (Rosalia), 176.
lateralis (Stenhomalus), 167.
lateralis (Xylotrechus), 244.
lateritia (Rosalia), 177.
laticolle (Stromatium), 115.
laticollis (Epipedocera), 307.
lavinia (Leptura), 83.
Leontium, 210.
lepta (Leptura), 84.
Leptura, 81.
Lepturinæ, 68.
leucoscutellatus (Demonax), 286.
leucostictieum (Ceresium), 159.
lichencus (Apiocephalus), 74.
lineatus (Demonax), 281.
Linomius, 169.
literatus (Demonax), 284.
Logæus, 19.
longicorne (Stromatium), 115.
Longicornia, 1.
Lophosternus, 9.
ludens (Caloclytus), 269.
lundii (Euryphagus), 188.

macilentus (Animes), 99.
macilentus (Demonax), 291.
macilentus (Dymasius), 139.
macra (Ischnodora), 259.
macrospilus (Polyzonus), 216.
Macrotoma, 35.
Macrotomini, 29.
14-maculatus (Caloclytus), 266.
maculatus (Zoodes), 116.
maculicollis (Demonax), 297.
maculipennis (Œmospila), 105.
maculosum (Baralipton), 42.
malaccensis (Purpuricenus), 185.
manipurensis (Leptura), 86.
manipurensis (Rhaphuma), 274.
marginale (Ægosoma), 45.
Margites, 137.
Massicus, 129.
mauritanicus (Derolus), 135.
maxillosus (Euryphagus), 187.
Megasemum, 96.
megaspilus (Polyzonus), 215.
melancholicus (Caloclytus), 267.
Melegena, 66.
Merionœda, 171.
metallica (Polyphida), 321.
methocoides (Clytellus), 312.
microspilus (Polyzonus), 215.
miniacea (Leptura), 82.
miniatus (Pyrestes), 227.
minor (Caraphia), 76.
minor (Dymasius), 140.
minor (Molorchus), 169.
minutissimus (Clytus), 253.
modestum (Ceresium), 160.
modica (Apatophysis), 71.
modicus (Acanthophorus), 25.
modicus (Margites), 138.
moesta (Iresioides), 320.
moestus (Caloclytus), 266.
Molorchini, 169.
Molorchus, 169.
Monodesmini, 52.
montana (Apatophysis), 71.
montanus (Clytus), 253.
montanus (Dorysthenes), 7.
montanus (Purpuricenus), 186.
monticola (Clytus), 251.
monticola (Demonax), 282.
mordax (Priotyrannus), 22.
morosus (Cerambyx), 131.
morosus (Hoplocerambyx), 131.
mouhoti (Clytanthus), 285.
mulio (Demonax), 292.
murinus (Oligoenoplus), 302.
mutabilis (Perissus), 256.
muticus (Tetraommatus), 101.
myops (Perissus), 258.
Mythodini, 182.

nebulosus (Zatrephus), 148.

Neocerambyx, 124.
Neoprion, 28.
neoxenum(Aphrodisium), 208.
nepos (Chlorophorus), 262.
Nericonia, 67.
nerii (Cerambyx), 135.
nerii (Hammaticherus), 135.
Nida, 318.
niger (Plocæderus), 121.
nigra (Cyrtonops), 60.
nigra (Nericonia), 67.
nigra (Sebasmia), 145.
nigriceps (Merionœda), 173.
nigriceps (Tetraommatus), 103.
nigripes (Cerambyx), 188.
nigrita (Anœme), 53.
nigrofasciatus(Demonax), 280.
nigromaculatus (Demonax), 284.
nigropunctatus (Dandamis), 50.
nilgiriense (Ceresium), 161.
nilgiriensis (Perissus), 256.
nilgiriensis (Zoodes), 117.
Niræus, 193.
nitidus(Hammaticherus), 121.
noctis (Cerambyx), 79.
Nothopeus, 202.
nympha (Chloridolum), 201.
Nyphasia, 151.
Nysina, 153.

oberthuri (Oplatocera), 108.
obesus (Plocæderus), 121.
oblongomaculata (Demonax), 283.
Obriini, 164.
Obrium, 165.
obscurus (Astrinus), 155.
obtusus (Polyzonus), 218.
odontoceroides (Artimpaza), 314.
Œmini, 98.
Œmospila, 104.
olesteroides (Clytellus), 313.
Oligoenoplus, 301.
Oplatocera, 107.
oreinum (Tetropium), 95.
orientalis (Nysina), 153.
orientalis (Prionomma), 17.
orientalis (Prionus), 17.
ornaticolle (Ægosoma), 45.
Oxymirus, 78.

Pachydissus, 133.
Pachylocerus, 224.
Pachyteria, 194.
palpalis (Lophosternus), 12.
parandræformis (Neoprion), 29.
Paraphrus, 13.
parens (Caloclytus), 270.
paris (Neocerambyx), 124.
parvicollis(Pachydissus), 134.
parvulus (Perissus), 258.
pascoci (Massicus), 129.
pascoei (Nyphasia), 153.
pascoei (Xoanodera), 150.
patkaina (Rhaphuma), 272.
patricius (Caloclytus), 268.
pauper (Dialeges), 142.
pedestris (Plocæderus), 123.
pedestris (Plocederus), 121.
Peithona, 71.
Perissus, 254.
perlætum (Chloridolum), 201.
persimilis (Demonax), 298.
persimilis (Perissus), 256.
pertii (Dissosternus), 8.
phiale (Rhaphuma), 273.
phidias (Xylotrechus), 243.
Philagethes, 184.
Philini, 54.
Philus, 57.
Phoracanthini, 151.
Phyodexia, 182.
Phyton. 165.
pilosus (Pachylocerus), 225.
placida (Rhaphuma), 275.
plagiata (Macrotoma), 37.
plagiatus (Dymasius), 141.
Plangone, 308.
planicolle(Aphrodisium), 206.
Plocæderus, 120.
Plocederus, 120.
plumiferus (Pachylocerus), 226.
Pneumida, 156.
Polyphida, 321.
polyzonoides (Chelidonium), 219.
Polyzonus, 213.
posticum (Obrium), 165.
præcana (Rhaphuma), 285.
præusta (Rhaphuma), 276.
prasinus (Polyzonus), 219.
Prinobius, 35.
Prionidæ, 2.
Prionides, 2.
prionides (Peithona), 72.
Prioninæ, 2.
Prionini, 2. 4.
Prionomma, 16.
Prionus, 14.
Priotyrannus, 21.
proprius (Perissus), 255.
Protaxini, 92.
Protaxis, 93.
Prothema, 235.
Prothemini, 232.
Psalanta, 65.
Pseudoleptura, 229.
Psilomerus, 299.
pubipennis (Melegena), 66.
puella (Merionœda), 171.
pugnax (Leptura), 80.
pugnax (Rhondia), 80.
punctipennis (Apiocephalus), 74.
punctipennis (Cyrtonops), 60.
Purpuricenini, 183.
Purpuricenus, 184.
putzeysi (Xylotrechus), 242.
Pyrestes, 227.
Pyresthes, 227.
Pyrestini, 224.
Pyrocalymma, 88.

pyrochroides (Pyrocalymma), 89.
pyrrha (Ipothalia), 223.
pyrrhus (Pyrestes), 228.

quadricollis (Demonax), 293.
quadricolor (Demonax), 292.
quadricolor (Rhaphuma), 271.
quadridens (Centrotoclytus), 308.
quadridentatus (Homalomelas), 234.
quadridentatus (Zoodes), 116.
quadrimaculatus (Polyzonus), 214.
quadrinotatum (Stenygrinum), 164.
quadripes (Xylotrechus), 245.
quinquenotata (Rhaphuma), 277.

raripilum (Ceresium), 156.
redemanni (Zonopterus), 192.
regularis (Xoanodera), 150.
relictus (Hoplocerambyx), 131.
Remphan, 33.
reticollis (Demonax), 289.
Rhaphipodus. 30.
Rhaphuma, 271.
rhea (Rhaphuma), 276.
Rhondia, 79.
Rhytidodera, 146.
robusta (Rhytidodera) 147.
robustum (Aphrodisium), 209.
Rosalia, 176.
Rosaliini, 175.
rostratus (Anubis), 221.
rostratus (Dorysthenes), 6.
rotundicolle (Ceresium), 160.
rubricollis (Caloclytus), 265.
rubriola (Leptura), 81.
rubripennis (Aphrodisium), 210.
rufipes (Ceresium), 158.
rufum (Ceresium), 157.
rugiceps (Acanthophorus), 24.
russicollis (Rhaphuma), 264.
rusticus (Criocephalus), 96.

sagittarius (Caloclytus), 261.
saigonensis (Polyzonus), 214.
Sakuntala, 62.
Salpinia, 163.
sanguineus (Bicon), 310.
sanguinolentus (Purpuricenus), 184.
Sarmydus, 51.
sarta (Æolesthes), 129.
sartorii (Xylotrechus), 241.
scabricorne (Ægosoma), 44.
Sebasmia, 143.
semiluctuosus (Demonax), 285.
semiscutellata (Rhaphuma), 286.
sericeus (Hesperophanes), 112.
sericus (Pachydissus), 133.
serraticornis (Acanthophorus), 23.
serripes (Macrotoma), 35.
setulosa (Epipedocera), 308.
sexnotata (Rhaphuma), 275.
siamensis (Xylotrechus), 243.
Sigeum, 235.
signata (Prothema), 235.
signiferum (Stromatium), 118.
similis (Lophosternus), 13.
similis (Pachydissus), 127.
simplex (Ceresium), 162.
simplex (Diorthus), 133.
simplex (Gnatholea), 111.
simplex (Thranius), 237.
simulans (Rhytidodera), 148.
simulator (Clytus), 252.
sinense (Chelidonium), 212.
sinensis (Æolesthes), 128.
sinensis (Trachylophus), 146.
Singalia, 236.
Sinolus, 169.
smei (Xylotrechus), 241.
socia (Palpinia), 163.
socius (Caloclytus), 264.
socius (Lophosternus), 11.
sordidus (Neocerambyx), 133.
speciosus (Caloclytus), 260.
Sphegesthes, 250.
spinicornis (Hoplocerambyx), 131.
spinipennis (Singalia), 237.
spinosa (Macrotoma), 38.
spondyloides (Cantharocnemis), 26.
stebbingi (Xylotrechus), 244.
Stenhomalus, 166.
Stenomalus, 166.
Stenygrinum, 163.
strigosus (Dymasius), 139.
strigosus (Hypoëschrus), 104.
Stromatium, 114.
stygia (Capnolymma), 73.
subcoriaceus (Sarmydus), 51.
subdepressus (Xylotrechus), 249.
subditus (Xylotrechus), 246.
subopacus (Logæus), 20.
subopacus (Rhaphipodus), 32.
subscutellatus (Xylotrechus), 242.
sulcatus (Pachylocerus), 225.
sulcicollis (Margites), 138.
sulcipenne (Ægosoma), 48.
sulcipennis (Ephies), 88.
superba (Pachyteria), 195.
suturalis (Rhaphipodus), 30.
suturalis (Rhaphuma), 278.

taprobanica (Merionœda), 173.
taprobanicus (Dœsus), 56.
taprobanicus (Molorchus), 170.
taprobanicus (Rhaphipodus), 30.
Teledapus, 77.

telephoroides (Callichromopsis), 181.
telephoroides (Dœsus), 56.
telephoroides (Kunbir), 174.
templetoni (Sebasmia), 144.
tenuicornis (Dialeges), 142.
terminale (Ægosoma), 49.
testacea (Sebasmia), 144.
testaceus (Demonax), 287.
Tetraommatus, 100.
tetraspilotus (Polyzonus), 214.
Tetropium, 95.
thoracica (Dere), 315.
Thraniini, 236.
Thranius, 236.
tibiale (Ægosoma), 47.
tibialis (Nothopeus), 204.
torrida (Nyphasia), 152.
toxotoides (Apatophysis), 69.
Toxotus, 78.
Trachylophus, 145.
tranquebaricus (Prionus), 17.
tricolor (Niræus), 194.
trifasciata (Nericonia), 67.
trigona (Xoanodera), 149.
trimaculata (Rhaphuma), 277.
trinalba (Rhaphuma), 278.
Trinophylum, 155.
triplagiatus (Thranius), 238.
trochanterius (Typodryas), 66.
trogoninum (Chloridolum), 199.
Typodryas, 65.

umbrina (Lamia). 121.
undulata (Epipedocera), 307.
undulatus (Dialeges), 143.
unicolor (Criocephalus), 97.
unicolor (Massicus), 130.
unicolor (Pachytocerus), 225.

velutinus (Pachydissus), 127.
ventrale (Ceresium), 160.
ventralis (Oligoenoplus), 302.
venustus (Massicus), 130.
vernicosus (Cerambyx), 133.
versutus (Cerambyx), 121.
vicinus (Clytus), 241.
virens (Leptura), 81.
voluptuosa (Pachyteria), 195.
volvulus (Cerambyx), 136.

walkeri (Baladeva), 9.
walkeri (Demonax), 289.
watsoni (Aglaophis), 304.
watsoni (Polyzonus), 218.
westwoodi (Erythrus), 231.

X-littera (Perissus), 254.
Xoanodera, 148.
Xylotrechus, 241.
Xystrocera, 105.

Y-pallidum (Stenhomalus), 167.

zeylanicum (Ceresium), 158.
zivetta (Lophosternus), 11.
zona (Epipedocera), 306.
zonatus (Homalomelas) 234.
zonopteroides (Pachyteria), 209.
Zonopterus, 190.
Zooblax, 38.
Zoodes, 115.

PRINTED BY TAYLOR AND FRANCIS, RED LION COURT, FLEET STREET.